Digital Entertainer Express EVA9100 User Manual

NETGEAR®

NETGEAR, Inc.
350 E. Plumeria Drive
San Jose, CA 95134 USA

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Customer Support

Refer to the Support Information card that shipped with your Digital Entertainer Express EVA9100.

World Wide Web

NETGEAR maintains a World Wide Web home page that you can access at: *http://www.netgear.com*.

A direct connection to the Internet and a Web browser such as Internet Explorer or Netscape are required.

Product and Publication Details

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Compliance

About This Manual

The Digital Entertainer Express works with a wide variety of digital storage formats and systems, which you can view can browse and play on your television screen. The *NETGEAR® Digital Entertainer Express EVA9100 User Manual* explains custom installation, how to set up and use the Digital Entertainer Express, and how to troubleshoot if problem occur.

Conventions, Formats, and Scope

The conventions, formats, and scope of this manual are described in the following paragraphs:

- **Typographical Conventions**. This manual uses the following typographical conventions:

Italic	Emphasis, books, CDs, file and server names, extensions
Bold	User input, IP addresses, GUI screen text
italic	URL links

- **Formats**. This manual uses the following formats to highlight special messages:

	Note: This format is used to highlight information of importance or special interest.
	Tip: This format is used to highlight a procedure that will save time or resources.
	Warning: Ignoring this type of note may result in a malfunction or damage to the equipment.

Danger: This is a safety warning. Failure to take heed of this notice may result in personal injury or death.

- **Scope**. This manual is written for the Digital Entertainer Express according to these specifications:

Product Version	Digital Entertainer Express EVA9100
Manual Publication Date	October 2009

For more information about network, Internet, firewall, and VPN technologies, see the links to the NETGEAR website in Appendix B, “Related Documents.”

Note: Product updates are available on the NETGEAR, Inc. website at *http://kbserver.netgear.com/products/EVA9000.asp*.

Version History

Table 1-1. Digital Entertainer Express EVA9100 User Manual Version History

Version	Publication Date	Description
1.0	October 2009	Original document

Chapter 1
Custom Installation and Configuraton

This chapter explains how to install the Digital Entertainer Express with custom setup, or with cables that are not included in the package.

- For basic installation using the composite video cable included in the package, see the *Digital Entertainer Express EVA9100 Installation Guide*.
- For a wireless connection, a USB Wi-Fi adapter (sold separately) is required. See the *USB Wi-Fi Adapter Quick Installation Guide*. To change your network connection from Ethernet to wireless, see "Network Connections" in Chapter 6.

Important Safeguards and Notices

Please observe these precautions, especially those regarding the risk of electric shock or injury to persons.

Danger: To reduce the risk of electric shock, do not remove the cover. There are no user-serviceable parts inside. This device should be used only indoors in well-ventilated areas. To reduce the risk of fire, electric shock, or interference, do not expose this appliance to moisture or rain, and use only the recommended accessories.

Warning: Displaying static images can cause burn-in on certain displays. Do not display static images (such as menus, photos, or paused videos) onscreen for long periods of time.

Front View

The front view of the of the Digital Entertainer Express is shown in the following figure:

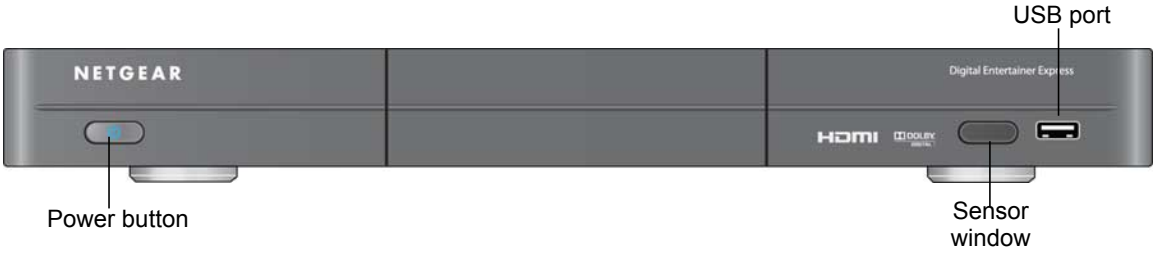


Figure 1-1

Rear View

The rear view of the Digital Entertainer Express is shown in the following figure:

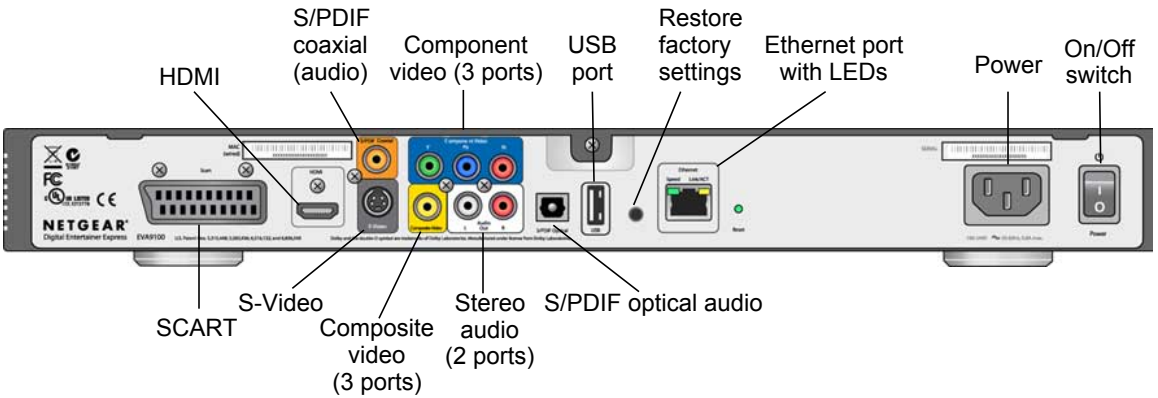


Figure 1-2

The rear panel includes the following elements:

- **Cable ports.** The Digital Entertainer Express works with a wide variety of audio and video cables. Composite video cable is included in the package. If you wish to use a different cable it musb be purchased separately. For information about connecting cables, see “Connecting the Digital Entertainer Express” on page 1-5

- **USB v2.0 port**. Can be used to connect USB mass storage devices such as hard drives, media players (including Windows- or Mac-formatted Apple iPods), and flash memory devices, or the optional Wi-Fi USB adapter (sold separately).
- **Ethernet port**. 10/100 Mbps Ethernet port with LEDs to connect the Digital Entertainer Express to a wired local area network (LAN).
- **Restore factory settings button**. Reset the Digital Entertainer Express to its factory default settings. To reset, press and hold the button down while the unit is powering up. The Power LED blinks to acknowledge the reset request.
- Power connector for the Digital Entertainer Express power cord.
- On/Off switch.

Remote Control

A remote control with batteries is included. For information about navigating with the remote control, see "Navigating with the Remote Control" on page 2-1.

Figure 1-3

Installing the Digital Entertainer Express with Custom Setup

Before you begin, determine which type of audio and video cables you need. This depends on your television and audio equipment.

- **Video display**. The picture display quality is related to the video format you use. If your television supports multiple formats, choose the format that provides the best picture quality. HDMI offers the best picture quality video. Component video provides the next best quality, followed by SCART, S-Video, and composite video. If you are viewing high-definition video, it will play with whichever video cable you connect, but the video quality will be best with HDMI.

  You can install the Digital Entertainer Express with the composite video cable in the package and change later to a different cable if your television supports it. See "Changing from Composite Video Cable to HDMI Video Cable" on page 6-3.
- **DTS sound or digital audio/visual (a/v) receiver**. If you have a digital receiver or you want DTS sound, use either a coaxial or optical S/PDIF audio cable (sold separately). You will also need a video cable. You can use the composite video cable included in the Digital Entertainer Express package, or you can use component video cable (sold separately) or HDMI cable (sold separately).

Table 1-1. Audio and Video Cables

Type of Connection	Required Cable
SCART	SCART television cable (sold separately) is used for both the audio and video signal.
HDMI	High-Definition Multimedia Interface (HDMI) cable (sold separately). If your television has an HDMI connector, you can use this cable for both the audio and video signal.
S/PDIF coaxial (audio)	Sony/Phillips Digital Interface (S/PDIF) cable, also called standard RCA type coaxial cable (sold separately). For the video cable you can use the composite video cable included in the package, or purchase HDMI or component video cable separately.
S-Video	S-Video cable (sold separately) connects video and audio.
Component video	Component video cable (sold separately) connects video and audio.
Composite video (included in the package)	Composite video cable connects video and stereo audio.
S/PDIF optical audio	Sony/Phillips Digital Interface (S/PDIF) for optical cable (sold separately). For the video cable you can use the composite video cable included in the package, or purchase HDMI or component video cable separately.

Install your Digital Entertainer Express in this order:

1. Connect the Digital Entertainer Express.
2. Set up the Digital Entertainer Express.
3. Install software on your computer with the *Resource CD*.
4. Configure your media library to work with the Digital Entertainer Express.

Connecting the Digital Entertainer Express

To connect the Digital Entertainer Express:

1. Connect the Digital Entertainer Express to your TV set. The following figure shows the composite video cable included in the package, and examples of two other video cables:

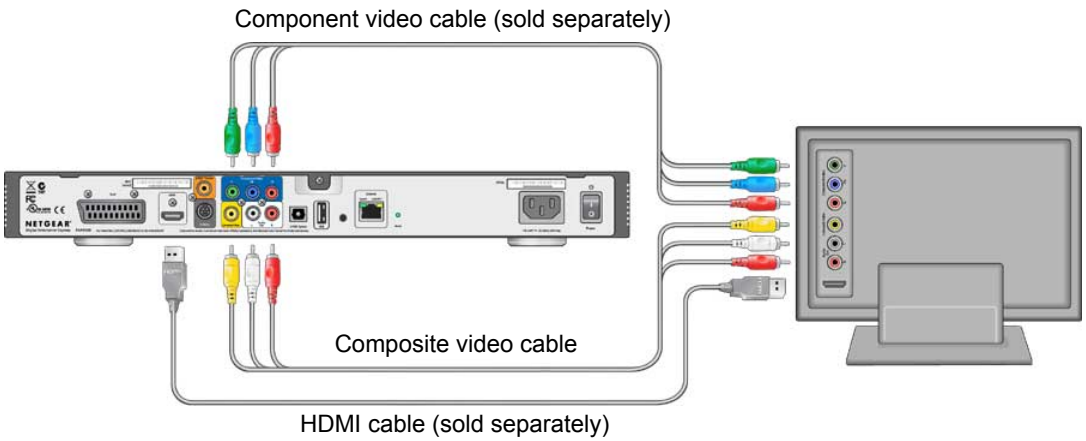


Figure 1-4

2. If you use a digital audio/visual (a/v) reciever or you want DTS sound, use either a coaxial or optical S/PDIF audio cable (sold separately) to connect the Digital Entertainer Express to your audio system.

3. Connect the Digital Entertainer Express to your router with an Ethernet cable.

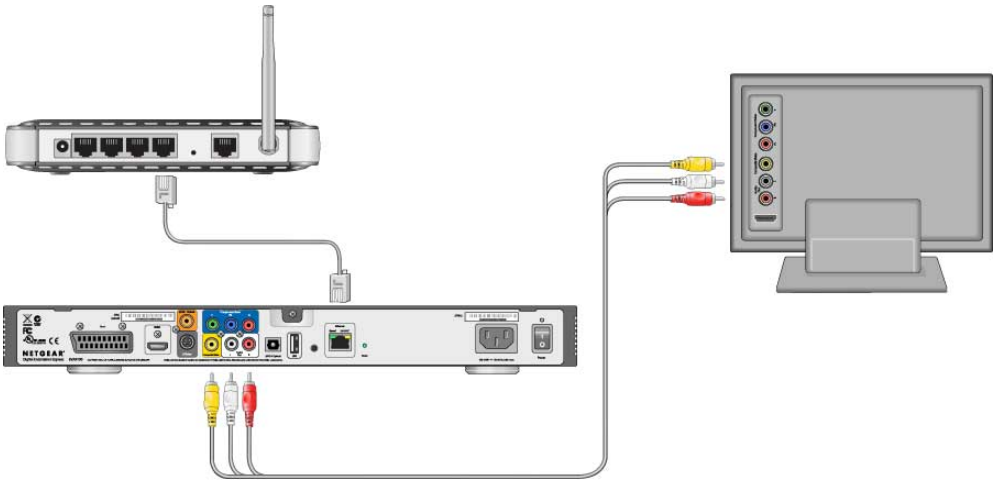


Figure 1-5

	For a wireless connection, you need a wireless USB adapter (sold separately).

4. Connect the power cord, and plug it into an outlet. Make sure the On/Off switch on the rear panel is set to on.

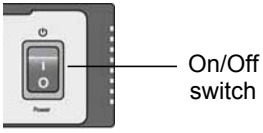


Figure 1-6

The LED on the front of the Digital Entertainer Express lights up when it is powered on.

5. Install the two AA batteries into the remote control that shipped with the product.

Setting Up the Digital Entertainer Express

To set up the Digital Entertainer Express:

1. Turn on the TV.

2. Set the video source selector on your TV to match the connection from your Digital Entertainer Express. For example, if you used HDMI, set the TV to use Digital HD or HDMI input.

Note: If your TV has multiple inputs of a specific type (such as HDMI1 or HDMI2), make sure that you have selected the correctly numbered input.

TV brands use different methods to identify their video source selectors. Many use a numbering system such as Input 1, Input 2 and so on. Others use names that vary according to the manufacturer. Check the instructions that came with your TV if you are not sure.

3. Check the TV display. If it is not clear, aim the remote control at the Digital Entertainer Express, and press **TV Mode**. You can cycle through the TV modes to get the best display. It can take 3 or 4 seconds for each TV mode change.
4. When prompted, select a language.
5. When you hear the audio welcome tone, press .

   If you do not hear the audio welcome tone, check the connections to the Digital Entertainer Express.
6. Select **Custom Setup**, and then specify the following settings:
   - Select the video mode. The selections that you see on the screen change if you use an HDMI connection.

Table 1-2. Video Modes

Type of Cable and Region	Available Video Modes
Analog cables	Standard TV NTSC 480i (works for most TVs in the US) Standard TV 480p HDTV Component 720p HDTV Component 1080i HDTV Component 1080p HDTV Component 720p 50Hz HDTV Component 1080i 50Hz HDTV Component 1080p 50Hz

Table 1-2. Video Modes

Type of Cable and Region (continued)	Available Video Modes
Analog cables for units sold in Europe and Australia	Standard TV PAL 576i Standard TV SCART PAL 576i Standard TV PAL 576p 50Hz Standard TV SCART PAL 576p 50Hz
HDMI cables	HDTV HDMI 480p HDTV HDMI 480i HDTV HDMI 720p HDTV HDMI 1080i HDTV HDMI 1080p HDTV HDMI 720p 50Hz HDTV HDMI 1080i 50Hz HDTV HDMI 1080p 50Hz HDTV HDMI 576i 50Hz HDTV HDMI 576p 50Hz

If you are not sure what the video mode should be, check the documentation that came with your television. If the wrong video mode is selected, the TV displays a blue screen and you will not see the next prompt to change the room name.

- Change room name. You can enter a room name or select a room name from the list.
- Depending on where you bought your Digital Entertainer Express, you might be prompted to enter your zip code or to choose your country and nearest city. If you want to receive weather information, enter your zip code or location. Press the **down arrow** when you are finished, and then press

.

7. You are prompted to install software.
   - If you use a Linux-based computer, you do not need to install the software. See "Accessing the Setup Wizard from the Digital Entertainer Express Menu" on page 1-15.
   - If you use a Windows-based PC or a Mac, see the following section, "Installing the Digital Entertainer for Windows Software" on page 1-8.
   - If you use a Mac, see "Installing the Digital Entertainer Software on a Mac" on page 1-10.

Installing the Digital Entertainer for Windows Software

After connecting the Digital Entertainer Express and completing setup you are prompted to install software.

To install software on your PC from the *Resource CD*:

1. Power on your computer, and log in as needed.
2. Insert the *Resource CD* into the CD drive on the computer.

   The Welcome screen displays. If you do not see the Welcome screen, browse the files on your *Resource CD*, and then click **Setup**.

Figure 1-7

3. Select **Install DE Express for Windows**.

   The Setup Wizard starts.

Figure 1-8

4. Follow the Setup Wizard steps to accept the licence and install the software. For computer running Windows XP, if a logo testing message appears, click **Continue Anyway**.
5. After the Setup Wizard steps are finished, click **Configure** to use the Configuration Wizard.

Figure 1-9

This icon appears in the system tray when the Digital Entertainer for Windows software is running.

Installing the Digital Entertainer Software on a Mac

After connecting the Digital Entertainer Express and completing setup you are prompted to install software.

To install software on your Mac from the *Resource CD*:

1. Power on your computer, and log in as needed.
2. Insert the *Resource CD* into the CD drive on the computer.
3. Double-click the file **NETGEAR Digital Entertainer for Macintosh.dmg**.

4. Click **NETGEAR Digital Entertainer.pkg**. The Welcome screen displays:

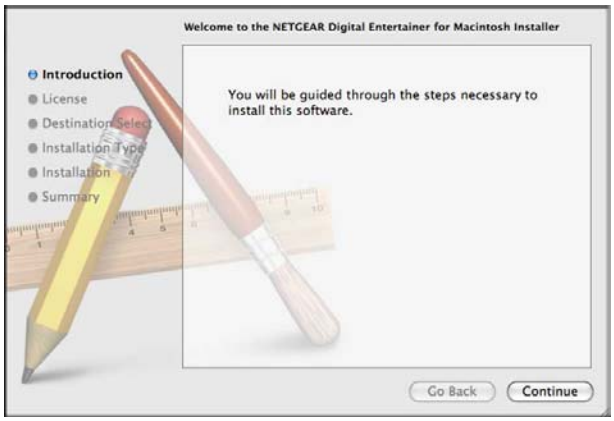


Figure 1-10

5. Follow the Setup Wizard steps to accept the licence and install the software. The following screen displays:

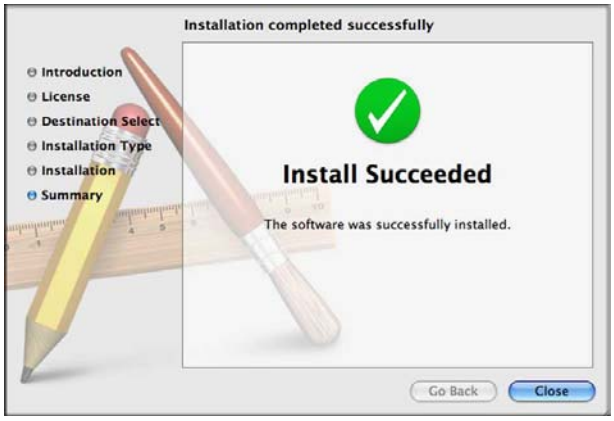


Figure 1-11

6. Click **Close**.

Configuring Your Media Library

You can use the Configuration Wizard with a Windows-based PC or Mac computer to set up your media library to work with the Digital Entertainer Express.

Using the Configuration Wizard with a Windows-Based PC

1. Access the Configuration Wizard:
   - If you just ran the Setup Wizard, the Configuration Wizard automatically opens.
   - After installation you can click the Windows Start menu and select NETGEAR > Digital Entertainer.

   The Configuation Wizard Welcome screen displays:

Figure 1-12

2. Click **Next**.

	Note: For some firewalls, specific ports must be opened so that the Digital Entertainer Express can access media files on your computer. If prompted, select **Allow** or **Unblock** to allow the access.

The Configuration Wizard prompts you to select media folders to be shared. This will allow the Digital Entertainer Express to access these files.

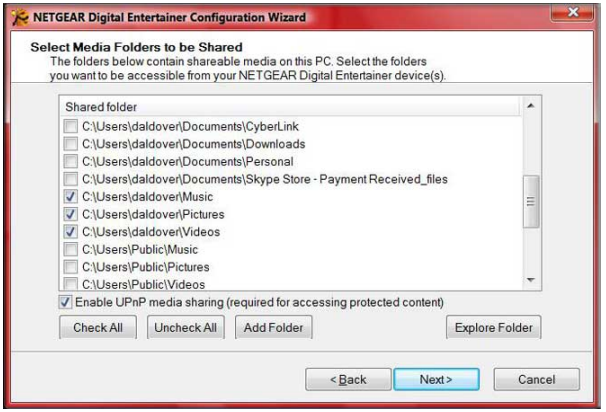


Figure 1-13

3. Browse and select the folders that you want, and then click **Next**.
4. Follow the onscreen instructions to configure your Digital Entertainer Express. When the configuration is complete, the following screen displays:

Figure 1-14

5. Click **Finish** and go to your TV.

   If you selected Custom Setup you are asked if you want to scan for network shares (media files located in shared folders).

   - **Yes**. The Digital Entertainer Express scans your network for shared media.

- **No**. The Set Up Network Shares screen displays offering the following choices:
  - **Build network shares list**. Scan the network for all shared folders.
  - **Select which servers to scan**. Select which shared folders the Digital Entertainer Express should check when it scans for media files.
  - **Add network share**. Enter the name of a hidden server, or add a password to a server. A hidden server does not broadcast its network name. You can specify SMB (Windows) or NFS format.

	If no media files are found,

6. The Digital Entertainer Express main menu displays. You can now play media files.
   - For tips about navigating, see Chapter 2, “Getting to Know Your Digital Entertainer Express.”
   - For information about playing media, see Chapter 3, “Listening and Viewing.”

Using the Configuration Wizard with a Mac

1. Access the Configuration Wizard:
   - If you just ran the Setup Wizard, the Configuration Wizard automatically opens.
   - After installation you can ?

   The Configuation Wizard Welcome screen displays:

Figure 1-15

2. Follow the wizard steps to find media. Browse and select the folders that you want. The wizard finds the Digital Entertainer Express.
3. Follow the onscreen instructions to configure your Digital Entertainer Express. When the configuration is complete, the following screen displays:

Figure 1-16

4. Click **Quit** and go to your TV.

Accessing the Setup Wizard from the Digital Entertainer Express Menu

You can use the Setup wizard to connect the Digital Entertainer Express to your network, and to share media files on your network so that the Digital Entertainer Express can access them. Use this screen to set up access to media files on your network that are on Linux systems or storage servers attached to the network.

To use the Setup wizard:

1. Press **Home**, and select More > Supervisor functions to display the following screen:

Figure 1-17

2. Select Setup Wizard.

   After you select a language and hear the audio welcome tune, you are offered a choice of Basic or Custom setup.

3. Select Custom Setup to display the Setup Wizard screen, which offers these options:

- **Select video mode**. Set the appropriate resolution for your TV. See Table 1-2 on page 1-7.
- **Change room name**. This feature is useful if you have more than one Digital Entertainer Express. You can select room names, such as living room, from the list or, you can enter a room name, using the onscreen keyboard.
- **Enter your ZIP code or country**. This setting is used to receive news and weather for the local area. Depending on your location you may be prompted to enter your zip code or country and city.
- **Install Computer Software**. Next, you are prompted to use the *Resource CD* (included with your Digital Entertainer Express) on the computer where you store your media files. Follow the prompts to complete the setup of your Digital Entertainer Express.
- **Scan for shared content**. Your Digital Entertainer Express will scan your network for shared folders. Alternately, you can enter the name of a network workgroup to be scanned.
- **Data location**. Specify a writeable server location where your media library and other persistent data files can be stored.

Playing Protected Media Files

Media files bought or downloaded from online services such as Napster, MSN Music, MovieLink, and others are usually protected by Windows Media Digital Rights Management (DRM). They can be played only from a PC using Windows Media Player Media Sharing. Other third-party media servers do not work with these files.

Windows Media Player Version 11 can be downloaded from *http://www.microsoft.com/windows/windowsmedia/player/11/default.aspx*.

Protected Media Stored on a Mac

To play protected iTunes media that is stored on a Macintosh:

1. Use the Configuration Wizard to share your media with the Digital Entertainer Express. See "Configuring Your Media Library" on page 1-11.
2. Install iTunes on the PC that contains the Digital Entertainer for Windows software.
3. The first time you try to play iTunes media, you will be asked to enter your iTunes password on the PC that contains the Digital Entertainer for Windows software.

Protected Media Stored on a PC

To play protected media that is stored on a PC, you need the following:

- Windows Media Player 11 software.
- iTunes for Windows software if you use iTunes media.
- The Digital Entertainer for Windows software on the same PC (required for iTunes playback only).
- The protected music files must be in a shared folder to play on the Digital Entertainer Express.

Note: If you use Windows Media Player Sharing to access downloads with DRM, NETGEAR recommends that you place all your protected media files in one folder, and use Windows Media Sharing to share only that folder. Then use the Configuration Wizard to share all other folders. See "Connecting to a Server" on page 6-10.

To play protected media that is stored on a PC:

1. Make sure that Windows Media Player version 11 is installed on your computer.

2. If the Configuration wizard is not open, On the Windows Start menu, select All Programs> NETGEAR Digital Entertainer for Windows > Configuration Wizard.
3. Select the Enable UPnP Media Sharing checkbox.

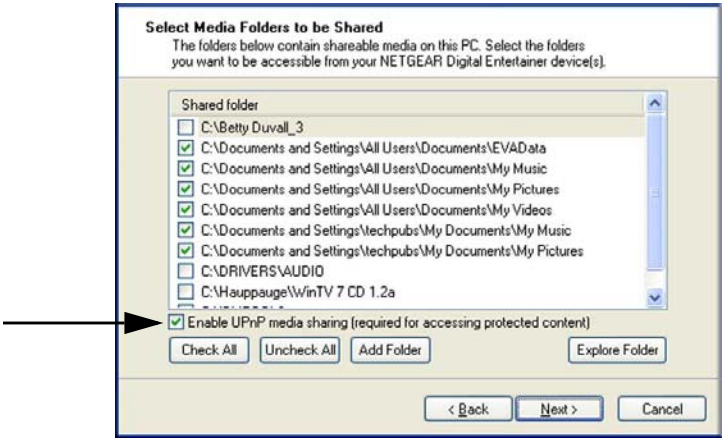


Figure 1-18

4. Click **Next**.

Chapter 2
Getting to Know Your Digital Entertainer Express

You can use your remote control and television screen or you can use the web browser on your PC to browse, select, and play media files.

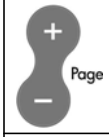
Navigating with the Remote Control

Use the remote control to view menus on your television screen. The following table explains how to use the remote control buttons.

Table 2-1. Remote Control Buttons

Button	Description
Power	Turn the Digital Entertainer Express on and off. Note that there is also an On/Off switch on the rear panel of the Digital Entertainer Express.
Stop	Stop the media that is currently playing.
Rotate photo	Rotate a photo.
Information	Display media information.
Rewind	Rewind to the beginning of the media that is playing.
Play/Pause	• Pause or resume playing the media. This button also resumes normal play from fast wind mode. • In the media menus, Play plays the selected item and queues up the rest of the items in the order shown on the screen.
Fast-forward	Fast-forward playing media.
Back	Go back to the previous screen.

Table 2-1. Remote Control Buttons (continued)

Button	Description
Navigation/OK	Navigate the menu selections. Press **OK** to select or to play a single song or video.
Home	Display the main menu.
Previous	Skip back to previous item playing. When navigating the menus, this button takes you directly to the first item in the list.
Next	Skip forward to next item on the playlist. When you are navigating the menus, this button takes you directly to the last item in the list.
Volume	Increase or decrease volume.
 Page up and Page down	Scroll up or down. This button is also used to zoom videos and photos.
Mute	Mute or unmute the sound.
Music	Display the Music menu.
Video	Display the Video menu.
Pics	Display the Picture menu.
Menu	Returns to the top level menu if you are in the music, video, or picture menus.
0–9	Use for alpha-numeric entry, choosing presets, and searching.
Caps Lock	Toggle Caps Lock or numbers on or off. Also toggles between the menu and full screen display if a slideshow or video is playing.
TV Mode	Cycle between TV output modes.
Repeat	Repeat a track or media selection.
Zoom	Change the aspect ratio of videos or photos.

Television Main Menu

To go to the main menu, press **Home** on the remote control. The main menu displays:

Figure 2-1

- **Video**. Watch recorded video.
- **Music**. Listen to music files or Internet radio.
- **Photos**. View photos.
- **Internet Media**. Watch YouTube or Internet podcasts, view Flickr photos, browse Internet radio stations, or remove or add a station. See "Playing Internet Media" on page 3-9.
- **News/Weather**. View news and weather. To receive local weather you must enter your zip code. You can enter your zip code during installation or through local settings. See "Viewing News and Weather" on page 3-13.
- **PC Access**. Access your PC remotely to check e-mail or browse the web from your TV.

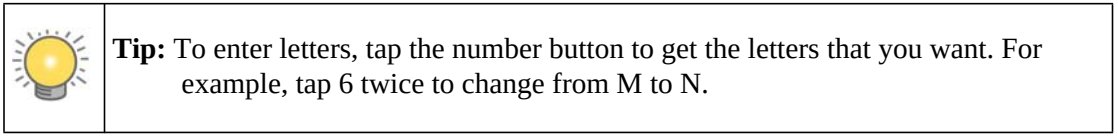
	Tip: Do not use the PC Access feature to stream Internet video while browsing the Internet. This feature is intended for lower bandwidth tasks such as Web browsing and email.

- **More**. View or work with system functions. See "Advanced Features and More Features" on page 5-1."

Tips When Using the Remote Control to Browse or Search

Here are some tips to help you quickly locate media files.

- You can combine categories to narrow your search. For example, you can browse by genre and then by rating to get to R-rated action movies.
- Some audio or video files might be stored without information in some fields, such as album or genre. If this is the case, these tracks are listed in a category called Unknown. You can use the Tag Tool to fix these. See “Using the Tag Tool Application” on page 4-3.
- You can enter letters contained in a title to quickly find a media file by name when browsing. For example, enter **EYE** to find both Goldeneye and For your Eyes Only.



Tip: To enter letters, tap the number button to get the letters that you want. For example, tap 6 twice to change from M to N.

Parental Control

You can block video files by rating, or block any files based on their location. See “Setting Up Parental Control” on page 4-13.

If you have more than one Digital Entertainer Express on your home network, you can use these features:

- **Send message to other** . Send messages from one Digital Entertainer Express to another.
- **Monitor another Digital Entertainer Express**. To monitor what is playing in another room, select More > Now playing, and use the left and right remote buttons to scroll between rooms.

Digital Entertainer Software for Windows

To start the Digital Entertainer software, select it from the Windows Start menu. If the Digital Entertainer software is already running, click the icon to display the following screen:

Figure 2-2

The following options are available:

- Configure your Digital Entertainer. Use the Configuration Wizard. See "Configuring Your Media Library" on page 1-11.
- Get Status for Digital Entertainers. See "Viewing Digital Entertainer Express Status from Your PC" on page 4-1.
- Remote control your Digital Entertainers. See "Accessing the Digital Entertainer Express with Your Browser" on page 2-6.
- Modify Tag and Album Art information. See "Using the Tag Tool Application" on page 4-3.
- Copy files to your Digital Entertainers. If your home network includes a Digital Entertainer model with a hard disk, you can copy files to it.
- NETGEAR documentation.
- Check for Updates. See "Updating the Firmware" on page 6-1.

Accessing the Digital Entertainer Express with Your Browser

You can access the Digital Entertainer Express with any browser that supports HTML 3.2, including browsers on PCs and on most PDAs.

	Note: Cookies must be enabled for the browser menus to work correctly.

From a browser, you can use the same menus displayed on the television. A few functions are available *only* through the browser. You can set up your favorite Internet radio stations that are not on the Digital Entertainer's top 500 list, to add RSS news feeds, and to configure complex network settings. The browser main menu screen is shown in the following figure:

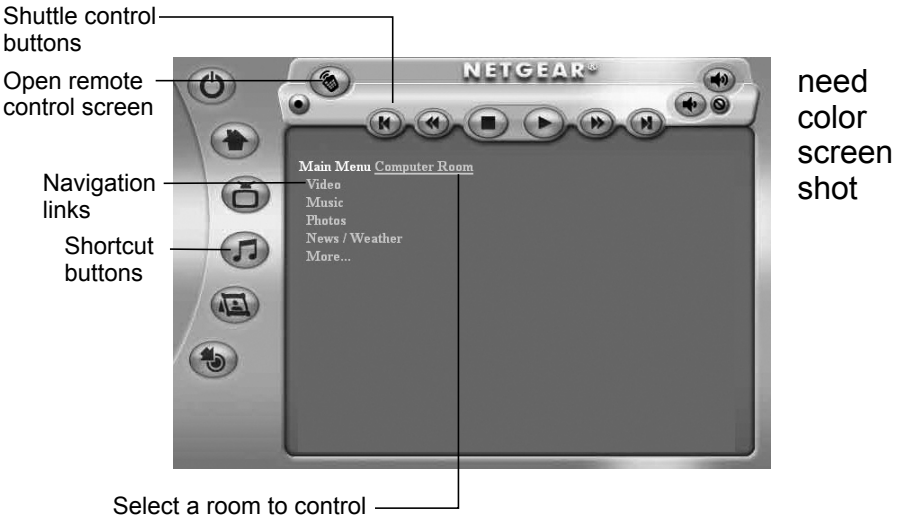


Figure 2-3

To access the browser menu, do one of the following:

- Right-click the Digital Entertainer for Windows task bar icon, and select the room name of the Digital Entertainer Express that you want to access.
- Set your browser to the IP address of the Digital Entertainer Express that you want to configure. To view the IP address, press **Home** and select More > Supervisor > System Information.

To change which room you are controlling, click the room name. A list of available rooms displays.

Using Your Browser to Play Media

To start playing something, click a menu entry. For example, click Music to browse to the music you want to play, and then select a song. When media playback starts, the browser opens the remote control screen shown in the following figure.

Figure 2-4

	Tip: You can also click the Remote Control icon in the browser menu to open the remote control screen.

The onscreen buttons correspond to the Digital Entertainer Express remote control. Click them to send commands to the Digital Entertainer Express. For example, click **Volume Up** to increase the volume in the selected room.

	Note: See "Supported Media File Formats" on page A-2 for a Web address for the list of supported formats.

Chapter 3
Listening and Viewing

USB Flash Drives or Media Players

You can connect up to two USB flash drives or a media player such as an iPod to a USB port on the front or rear panel of the Digital Entertainer Express.

The Digital Entertainer Express plays files stored in Windows (FAT, FAT32, NTFS), Macintosh, or Linux disk formats. It does not matter if you set up the music player on a PC or a Mac.

Note: Be sure to use USBv2 devices with your Digital Entertainer Express. The limited bandwidth of the older USBv1 devices might interfere with the performance of your playback.

To play media with a USB connection:

1. Either use a USB cable or directly insert your USB product to the USB port on the front or rear of the Digital Entertainer Express.

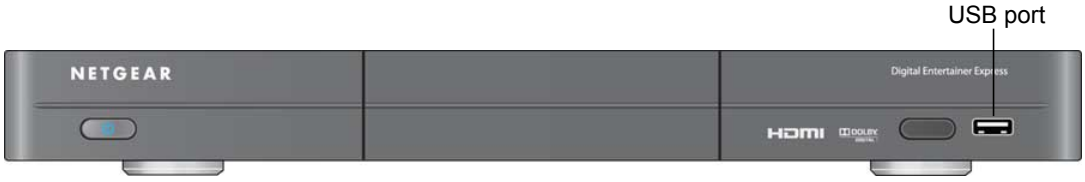


Figure 3-1

The Digital Entertainer Express scans the media, and then the media files are available for you to play on the Digital Entertainer Express.

2. If you want to play the media on your USB device, press **Music**, **Video**, or **Pics** on the remote control, and then select the media files.

Note: When browsing media files on an iPod, note that iTunes uses an unusual file-naming convention to store music files on the iPod. The Digital Entertainer Express can display only the folder names as they are saved on the iPod. You can find the files by using other criteria, such as artist or genre.

Listening to Music

The Digital Entertainer Express provides easy access to the music files on its hard disk, on your computers, on external hard drives connected to a computer or to the Digital Entertainer Express, or on other storage devices on the network.

To access music files, you need the following:

- The Digital Entertainer Express.
- Music files available on your network or on an attached USB device.

> **Note:** For help with protected media, see "Playing Protected Media Files" on page 1-17.

To listen to music:

1. Press **Music** on the remote, or press **Home**, and then select Music.

Figure 3-2

The Audio Player menu offers these selections:

- **Play something**. Play a random selection of shared music.

> **Tip:** To play an entire album or list of songs, highlight the first song, and press **Play**. The rest of the songs will be played in the order shown.

- **Browse**. Browse digital music such as MP3. See "Navigating with the Remote Control" on page 2-1 for tips.
- **Playlists**. Select and play a playlist.

	Note: Playlists should include only songs on the same server as the playlist itself, or the songs might not be identified correctly.

2. Select the music that you want to play.

	Tip: The **Repeat** button on the remote lets you repeat a selection.

3. If you have more than one Digital Entertainer Express on your home network, you can use these features:
   - **Follow me**. To move the music from one room to another, press **Home**, and select More > Follow me.
   - **Whole house audio**. You can have all the Digital Entertainer Express units play the same music simultaneously. Use Follow me, and select Everywhere; or use Follow me, and add rooms one at a time.

When you browse and select a song, it is added to the list of playing songs. You can select the next song while you are listening to a song. To go to a song you selected, either press **Stop** before you select the song, or press **Next** repeatedly until you reach the song you want to hear.

	Tip: To save the list of playing songs, press **i** on the remote, select View Playlist, and then select Save.

There might be a difference between the time displayed when you are browsing a song and the time displayed when you are listening to the song. The time embedded in the song file is shown in the browser, while the actual length of the audio file (calculated by the Digital Entertainer Express) is shown in the Now Playing screen.

The following table describes how the remote control works when music is playing or paused. For a complete list of all remote control buttons, see "Navigating with the Remote Control" on page 2-1.

Table 3-1. Remote Control When Music Is Playing

Button	When Music Is Playing	When Music Is Paused
	Fast-forward.	Not available.
or **9**	• Go to the next track. • Press **9** to skip to the next item playing in a second session. • For example, if you start music first and then photos, skips to the next song, while **9** skips to the next picture.	Go to the next track and start playing.
or **7**	• Go back to the start of the current track. If already at the start of the current track, go to the previous track. • Press **7** to skip to the previous item playing in a second session. • For example, if you start music first and then photos, skips to the previous song, while **7** skips to the previous picture.	Go back to the start of the current track. If already at the start of the current track, go to the previous track and start playing.
	Show the Now Playing screen.	Show the Now Playing screen.
	Pauses the music.	Not available.

Viewing Photos

The Digital Entertainer Express finds the media files on an optional internal hard disk, on your computer's hard disk, on other computers, on external hard drives, or on other storage devices on the network.

To view photos, you need the following:

- The Digital Entertainer Express.
- Photo files available on your network or on an attached USB device.

To view photos:

1. Press **Pics** on the remote control, or press **Home**, and then select Photos.

Figure 3-3

2. Browse by title, by folder, or by year. See "Navigating with the Remote Control" on page 2-1 for tips.
3. Press **Play** to view the selected photo and the rest of the listed photo as a slide show.

You can view photos in full screen or thumbnail mode.

- Press **OK** to toggle between thumbnail or full screen mode.
- **Full screen mode**. Cycle through the photos. These are displayed in the same size and zoom level as they were last viewed.
- **Thumbnail mode**. View thumbnails of several photos at a time, so you can scroll easily. In thumbnail mode, you can use **Page Up** and **Down** to change the number of thumbnails displayed.

Tip: To play music while watching a photo slideshow, press **Music**, and start playing a song or playlist. While the music is playing, press **Home**, and then select the photos that you want to view with the music in the background.

The following table describes how to use the remote control while viewing photos. For a complete list of all remote control buttons, see "Navigating with the Remote Control" on page 2-1.

Table 3-2. Using the Remote Control to View Photos

Button	Action When Viewing Photos
	Speed up the slide show. The maximum speed depends on the size of the photos.
	Slow down the slide show.
or 9	• Go to the next photo. • Press 9 to skip to the next item playing in a second session. • For example, if you start photos first and then music, will skip to the next picture, while 9 will skip to the next song.
or 7	• Go back to the previous photo. • Press 7 to skip to the previous item playing in a second session. • For example, if you start photos first and then music, will skip to the previous picture, while 7 will skip to the previous song
	Toggle to and from thumbnail view.
	Zoom in and zoom out in full screen mode. When viewing thumbnails, increase or decrease the size of thumbnails.
Zoom	Change the aspect ratio. The aspect ratio settings adjust the display of the photo for different types of television sets.
	Select another thumbnail in thumbnail view. Pan photo in full screen view.
	Rotate a photo. For faster results, switch to thumbnail view by pressing **OK**; rotate the thumbnail; switch back to full photo view.
	Go back to last Video Browser menu.
Music	Jump to the music browser.
Video	Jump to the video browser.
Pics	Jump to the photo browser.

Playing Music and Viewing Photos at the Same Time

You can play both photos and audio media at the same time. For example, you can view a slideshow and play music.

- Start viewing photos, and then start the audio.
- You can start the audio first if you prefer.

Navigation commands from the remote control go to the media that you started last. The other buttons control the first media. For example, if you are playing music, and then start a slideshow, pressing Pause pauses the slideshow. You can press to skip to the next song, and 9 to skip to the next picture. Or, press to return to the previous song, or press 7 to return to the previous picture.

Note: The Digital Entertainer Express never deletes data from your network shares (shared media folders). You must manage your disk space, and delete files when you no longer want to keep them.

Viewing Stored Video Files

The Digital Entertainer Express finds the video files on its hard disk, on computer on your network, on external hard drives, or on other storage devices on the network.

Note: Downloaded content from noncommercial sources might be of varying quality, and might not play back correctly.

To view recorded video files, you need the following:

- Digital Entertainer Express.
- Video files available on your network or on an attached USB device.

To watch a video:

1. Aim the remote control at the digital media player, and either press **Video** or press **Home**, and select Video.

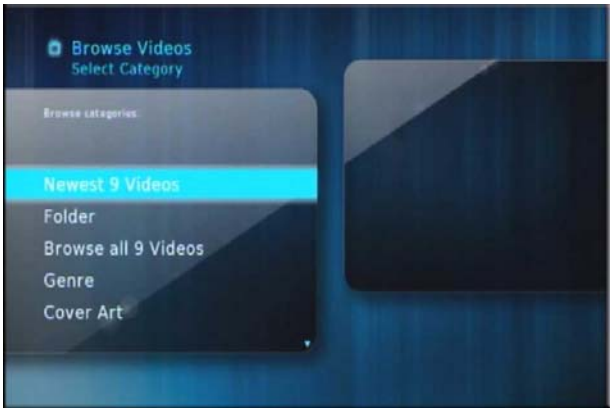


Figure 3-4

2. Select the category you prefer to browse, and then select the video that you want to watch.
   - To change the aspect ratio of the video to match your television screen, press the **Zoom** button on the remote control.
   - To display information about the video, press the **i** button on the remote control. This option is available only when a video is playing.

> **Tip: Play** plays the selected item, and then plays the rest of the items in the order shown on the screen.

The following table describes how to use the remote control when recorded (stored) video is playing. For a complete list of all remote control buttons, see "Remote Control" on page 1-3.

Table 3-3. Using the Remote Control When Stored Video Is Playing

Button	When Playing	When Paused	During Fast Forward or Rewind
	Fast-forward.	Slow motion.	Fast-forward faster.
	Rewind.		Rewind faster.
	Go forward 30 seconds.	Single frame.	Go forward 15 minutes.
	Go back 10 seconds.		Go back 15 minutes.
0–9	Jump in the file to 0%, 10%, 20%, … 90% of the file.	Jump in the file to 0%, 10%, 20%, … 90% of the file.	Jump in the file to 0%, 10%, 20%, … 90% of the file.

Table 3-3. Using the Remote Control When Stored Video Is Playing (continued)

Button	When Playing	When Paused	During Fast Forward or Rewind
Zoom	Toggle the aspect ratio.	Toggle the aspect ratio.	Toggle aspect ratio
	Zoom video in or out. Press **Home** twice to restore original size.	Zoom video in or out. Press **Home** twice to restore original size.	
	Go back to the last video browser menu.	Go back to the last video browser menu.	Go back to the last video browser menu.

Tip: When playing back DVD videos without integrated menus (Main Movie only), you can also use the onscreen DVD menu to turn subtitles on or off, change subtitle text, color and background, or to change the active audio track, for DVDs that contain more than one soundtrack.

1. To access the DVD screen, press **Menu** on the remote control, and then press **down arrow** to select a topic.
2. Press **OK** to open the screen, and then press **down arrow** to select a setting.
3. Press **OK** to accept the setting.

Playing Internet Media

To go to the Internet Media screen, press **Home**, and then select Internet Media.

Figure 3-5

The Internet Media menu offers these selections:

- **YouTube Video**. Playing YouTube videos may require that you have a PC running the Digital Entertainer for Windows software. See "Viewing YouTube Content" on page 3-10.
- **Internet Radio Player**. Browse and edit the list of Internet radio stations.

Tip: To add Internet radio stations more easily, use the Digital Entertainer Express Web browser menu. Find your favorite station on your PC, copy its URL, and paste that into the browser.

- **Internet Channels**. Use the Internet channels option to access RSS multimedia feeds, including Internet podcasts. For more information, see "Internet Channels" on page 3-13.
- **Flickr Photos**. The Flickr browser loads 500 photos at a time. You can browse the photos that have been loaded, or load more photos. When browsing, you can press Play to start a slideshow from the selected photo onward, or press OK to view a single photo full screen. The Flickr photo viewer is identical to the regular slideshow viewer and all of the same buttons apply.
- **ReadyNAS Photos**. Internet Media also contains ReadyNAS photos, which allows you to view photos from your ReadyNAS attached storage device. To access these photos, sign in using your existing user name and password for ReadyNAS photos.

Viewing YouTube Content

You can use your Digital Entertainer Express to view YouTube content and add items or publishers to your favorites lists.

To do so, you need the following:

- The Digital Entertainer Express set up with access to the Internet through your network.
- A PC running the Digital Entertainer for Windows software. (This may be required to play some YouTube videos.)

To view YouTube content:

1. Press **Home**, and select Internet Media > YouTube.

Figure 3-6

2. Select the option you want to use to retrieve YouTube content, and press **OK**.
   - **Search**. Press **Caps Lock** to display the onscreen keyboard, and then use the arrow buttons on your remote control to enter a search term (tag). Your last search tag is displayed by default. Select OK on the onscreen keyboard to close the keyboard.
   - **Browse**. Browse categories of videos, such as action or animals.
   - **Featured**. Browse a list of top YouTube videos.
   - **Most Viewed**. Displays a list of popular YouTube videos.
   - **Top Rated**. Displays a list of videos rated highly by users.
   - **Recently Adde**d. Displays a list of videos recently uploaded to YouTube.
   - **My YouTube**. Choose this to sign in using your YouTube user name to access your playlists, online and local favorites, subscriptions, and history of watched videos.

   The results of your search are displayed, with a preview of each item shown on the right when an item in the list is selected.

3. Select the item you want to view, and press **OK**. Or, press **Play** to play the currently seclected video and queue the subsequent videos in the list.

   The Digital Entertainer Express begins playing the YouTube item.

	Note: Press the **Menu** button to view the video in full screen. You can also use the **Zoom** button to improve the picture quality when viewing YouTube content.

When you have finished viewing the item, you can save this publisher or this item in your favorites list for easy access in the future.

The following table describes how to use the remote control when YouTube content is playing. For a complete list of all remote control buttons, see “Remote Control” on page 1-3.

Table 3-4. Using the Remote Control When YouTube Is Playing

Button	When Playing	When Paused	During Fast Forward or Rewind
	Pauses the current video.	Plays the selected item and queues the other items in the order shown on the screen.	Returns to play mode.
	Fast-forward. Press twice to skip to the next video.	Slow motion.	Not available.
	Not available.	Not available.	Not available.
	Not available.	Not available.	Not available.
	• Stop the media that is playing. • If multiple videos are queued, the **Skip back** button skips to the previous video; the **Skip forward** button skips to the next video.	Not available.	Not available.
Zoom	Toggle the aspect ratio.	Toggle the aspect ratio.	Toggle the aspect ratio.
	Zoom the Video in or out. Press **Home** twice to restore the original size.	Zoom the Video in or out. Press **Home** twice to restore the original size.	Zoom the Video in or out. Press **Home** twice to restore the original size.
	Go back to the last YouTube browser menu.	Go back to the last YouTube browser menu.	Go back to the last YouTube browser menu.

Playing Internet Radio

You can use your Digital Entertainer Express to access and play Internet radio programming and add items or publishers to your favorites lists. To do so, you need the Digital Entertainer Express set up with access to the Internet through your network.

Note: Some Internet radio stations provide a low bit rate audio stream that your amplifier or receiver might not support. Try connecting the analog audio outputs of the Digital Entertainer Express to the analog inputs of your home audio amplifier or receiver, and switch the device to that input when listening to a low bit rate Internet radio station.

To access and play Internet radio programming:

1. Press **Home**, and select Music or select Internet Media.
2. Select Internet Radio, and press **OK**.
   - **Browse station**. You can browse by title, genre, or quality. Use the up or down arrows and **Page** up or down to scroll through the list. A preview of each item is shown on the right when an item in the list is selected.
   - **Remove station**. Remove an Internet radio station from the list.
   - **Add station**. Add an Internet radio station to the list. You need to know the station's URL (Web address).
3. Select the item you want to play, and press **OK**.

   The Digital Entertainer Express begins playing that item.

   When you have finished playing the item, you can save this station in your favorites list for easy access in the future.

Tip: You can use the browser menu from the PC to add stations to the favorites list.

Only the **Stop** button is available when Internet radio is playing. Press the **Stop** button to stop playing the Internet radio.

Viewing News and Weather

You can use the Digital Entertainer Express to view news and weather. To view news and weather, you need the Digital Entertainer Express set up with access to the Internet through your network.

Viewing Weather

To receive local weather, you must enter your zip code. You can enter your zip code during installation or using Digital Entertainer Express settings. (Press **Home**, and select News/ Weather.)

Internet Channels

Internet Channels uses Really Simple Syndication (RSS) for accessing regularly updated information such as news, podcasts, and blogs. Common sources are the major television networks and wire services, as well as many Internet websites and portals. Many of these Internet channels contain associated video, audio, or pictures.

To use the Digital Entertainer Express to browse RSS feeds on your television, press **Home**, and select Internet Media > Internet channels. The Digital Entertainer Express includes several common feeds, and you can add your own. To add your own feed, select **Add new RSS feed**, and enter the URL (Web address) of the feed, as well as a descriptive title.

You can locate the RSS feeds on your computer and use the Digital Entertainer Express browser menu to save the RSS feeds to view on your television.

Chapter 4
Fine-Tuning Your Experience

The topics in this chapter will help you fine-tune your experience with the Digital Entertainer Express the following areas:

- Improving media library search results using tags and media art.
- Optimizing network performance to ensure that you get the best entertainment experience possible with your equipment.
- Taking precautions so that information such as personal photos sent over a wireless connection are not subject to snooping.
- Assuring that adequate parental controls are in place for using the digital media in your network.

Viewing Digital Entertainer Express Status from Your PC

From your Windows-based PC, you can view the status of any Digital Entertainer Express in your network.

> If you have more than one Digital Entertainer Express on your home network, you can use the remote to check what is playing in another room. Select More > Now playing, and use the left and right remote buttons to scroll between rooms.

To view the status:

1. From the Windows Start menu, select All Programs > NETGEAR Digital Entertainer for Windows > Digital Entertainer.

   This icon appears in the system tray when the Digital Entertainer for Windows software is running.

2. Click to open the Digital Entertainer for Windows screen.
3. Select Open.

4. If you have more than one Digital Entertainer, select the room that you want.

Tip: You can also monitor what is playing on another Digital Entertainer Express using the Now Playing screen on your TV. Use the right and left arrows to scroll between rooms and see what is s playing in each.

5. Select Status. The Status screen opens.

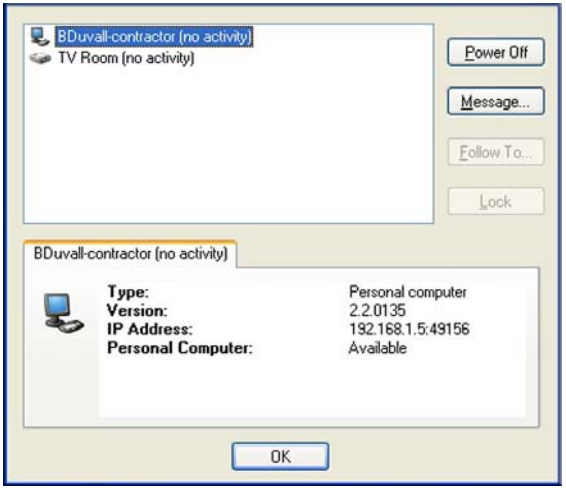


Figure 4-1

The Status screen includes these buttons:

- **Power Off**. Stop media. This does not turn off the Digital Entertainer Express.
- **Message**. Send a message for the Digital Entertainer Express to display on the TVscreen.
- **Follow To**. Have media that is playing follow you to another Digital Entertainer Express.
- **Lock**. For future use.

You can also right-click the Digital Entertainer Express name to select these additional options:

- **Play**. Play media in the selected room.
- **Control**. Open the remote control screen.
- **Power off**. Stops the selected session.

Improving Media Library Search Results

To make browsing easier or to add media cover art, you can tag your media files with the Tag Tool.

Using the Tag Tool Application

Use the Tag Tool to enhance your file management on third-party devices, such as your mobile phone or MP3 player, as well as on the Digital Entertainer Express. The Tag Tool works with these file formats: AVI, WMV, MPG, MP1, MP2, MP3, MKV, FLAC, ISO, and IFO. The Digital Entertainer Express can read the existing tag information associated with your media files.

Note: You can use the Tag Tool to remove a tag for a file. Select Remove Tag or select Edit > Remove Tag.

You can use the Tag Tool to add or change the identification information stored in media files. For example, you can enter the artist name or rating.

Note: If you set the rating for a file, you can also control access to that file from the Digital Entertainer Express Security screen.

To use the Tag Tool:

1. From the Windows Start menu, select All Programs > NETGEAR Digital Entertainer for Windows > Tag Tool.

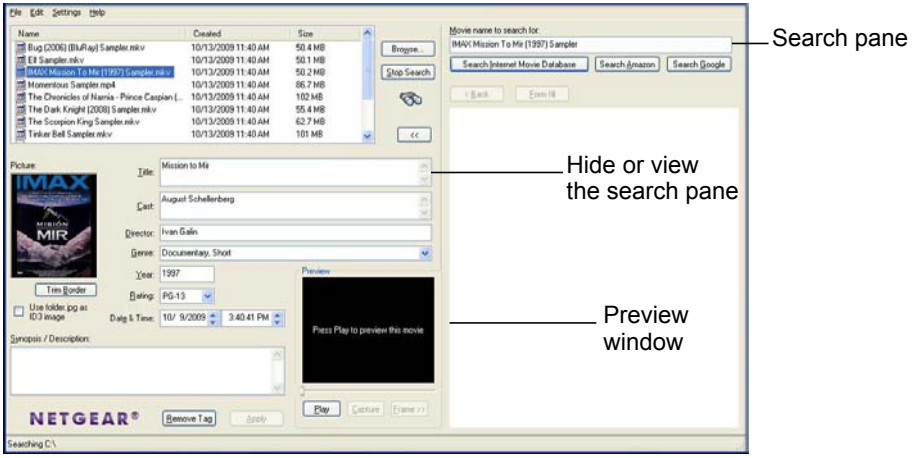


Figure 4-2

2. Locate the file that you want.
   - **File menu**. You can select File > Open to open a file.

- **Browse**. Click **Browse** to view the files within a folder, and then select the file that you want.
- **Preview window**. You can select Play to watch a preview.
- **Search pane**. Enter the name of video in the Name, and then use the Search pane buttons: **Search IMDB**, **Search Amazon**, or **Search Google**. After you select a movie, you can select Form Fill to copy the information from the Web page into the Tag Tool screen.

3. Make the changes that you want, and then click **Apply** to save the tag.

Adding Cover Art

You can use the Tag Tool application to add cover art to files individually or in groups.

Capturing a Video Frame for Cover Art

You can use the Tag Tool to capture a single frame from a video to use as cover art for your video.

To capture a video frame:

1. Click **Play** in the Preview window.

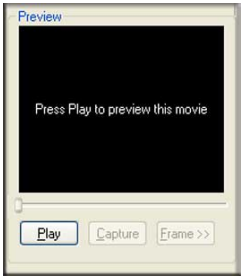


Figure 4-3

2. When you find a frame that you like, click **Capture**.

The frame is captured into the Preview image.

Adding High-Resolution Album or Cover Art

You can add high-resolution album or cover art to a media file.

To add high-resolution art:

1. In the Tag Tool screen, click **Search Amazon** to locate the art. For even higher-resolution images, click **See larger image**.

2. Right-click the image of the album or cover art.
3. Select Copy, and then right-click to copy and paste the image into the Tag Tools Picture area.

You can also copy and paste any other image into the Picture area.

Adding Album Art to All the Songs in an Album

If you want to tag all the songs in an album with the same cover art, the songs must be in the same folder.

To add album art to all songs on an album:

1. Place all the songs from the album in a single folder.
2. Select any one of the songs from the album in the Tag Tool list box.
3. Click **Search Amazon**, and copy and paste the album art into the Tag Tool Picture area.
4. Select the Use folder.jpg check box. This saves your cover art picture into a file named folder.jpg in the album's folder. Both Windows Media Player and the Digital Entertainer Express will recognize this as the album art for all the songs in the folder.

Using the Script Wizard to Automate Tasks

Use the Digital Entertainer Script Wizard to automate a variety of tasks. You can create three types of scripts:

- **Command script**.Creates a new script to automate the ways you use your Digital Entertainer Express.
- **Video script**.Creates a new script that appears in the video browser of your Digital Entertainer Express.
- **Audio script**.Creates a new script that appears in the audio browser of your Digital Entertainer Express.

To create a script:

1. From the Windows Start menu, select All Programs > NETGEAR Digital Entertainer for Windows > Script Wizard.

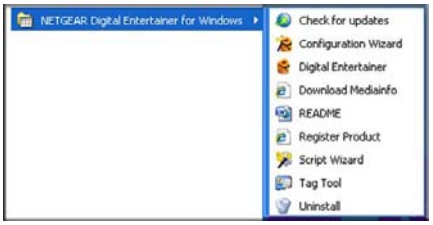


Figure 4-4

2. Select the script type (Command, Video, or Audio).

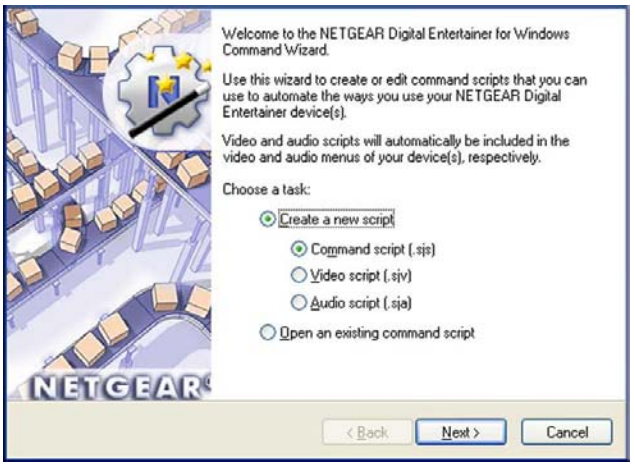


Figure 4-5

3. Click **New** to add an action from the list.
4. Select the options for the script action, if prompted, and then click **Next**.
5. Add additional actions, if necessary.

Understanding Home Networking

In recent years, home networks have become common. More and more, they include a variety of technologies that work together in ways that are not always obvious. The following topics identify common connection types, their speed, and security considerations.

- Broadband Internet
  Your Internet connection speed is determined by your Internet Service Provider, as well as the connection speed of the sites to which you connect, and general Internet traffic. ADSL and cable modem connections are asymmetrical, meaning they have a lower data rate *to* the Internet (upstream) than *from* the Internet (downstream). A typical residential ADSL or cable modem connection provides a downstream throughput of about 1 to 3 megabits per second (Mbps). Newer technologies such as ADSL2+ and Fiber to the Home (FTTH) increase the connection speed to tens of Mbps.

- Wireless
  Current-generation 802.11n wireless routers such as the NETGEAR WNR854T RangeMax NEXT Wireless-N Router provide wireless data throughput of up to 300 Mbps using technology called multiple input, multiple output (MIMO). MIMO uses multiple antennas to transmit multiple streams of data. The use of multiple (internal) antennas also provides excellent range and coverage. With the introduction of the newer WPA and WPA2 encryption and authentication protocols, wireless security is extremely strong.

- Powerline
  For connecting rooms or floors that are blocked by obstructions or are distant, consider networking over your building's AC wiring. NETGEAR's Powerline HD family of products delivers up to 200 Mbps to any power outlet and connects to your devices and network using standard Ethernet cables.

  Note: You need at least two Powerline HD adapters to make this type of connection in your network.

  Data transmissions are encrypted for security, and you can configure an individual network password to prevent neighbors from connecting.

  The Powerline HD family of products can coexist on the same network with older-generation XE family products or HomePlug 1.0 products, but they are not interoperable with these older products.

- Wired Ethernet
  As Gigabit Ethernet ports become common on newer computers, wired Ethernet remains a good choice for speed, economy, and security. Gigabit Ethernet can extend up to 100 meters with twisted-pair wiring of Cat 5e or better. A wired connection is not susceptible to interference, and eavesdropping would require a physical connection to your network.

Assessing Your Speed Requirements

Because your Internet connection is likely to operate at a much lower speed than your local network, faster local networking technologies might not improve your Internet experience. However, many emerging home applications require high data rates. For example:

- Streaming HD video requires 10 to 30 Mbps per stream. Because latency and packet loss can disrupt your video, plan to provide at least twice the capacity you need, or add an internal hard drive to provide “buffering” for your connection.
- Streaming MP3 audio requires less than 1 Mbps per stream and does not strain most modern networks. Like video, however, streaming audio is also sensitive to latency and packet loss, so a congested network or a noisy link can cause problems.

Note: Actual data throughput varies. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, can lower actual data throughput rate.

Optimizing the Performance of Your Home Network

To get the best performance from your home network, you should optimize each portion of the network, as well and place files in the network where they will get the bandwidth their use will demand.

Wireless Performance (USB Wireless Adapter Required, Sold Separately)

The speed and operating distance or range of your wireless connection can vary significantly based on the physical placement of the wireless router. You should choose a location for your router that will maximize the network speed.

Tip: To find the best location, start the Network test (from the Supervisor Functions screen) running on the Digital Entertainer Express, and then move the Digital Entertainer Express and the wireless router. Monitor the Network test results to determine which location maximizes network speed.

Note: Failure to follow these guidelines can result in significant performance degradation or inability to wirelessly connect to the router. For complete range and performance specifications, see “Technical Specifications” on page A-2.

The following list describes how to optimize wireless router performance.

- Identify critical wireless links.
  If your network has several wireless devices, decide which wireless devices need the highest data rate, and locate the router near them. Many wireless products have automatic data-rate fallback, which allows increased distances without a loss of connectivity. This also means that devices that are farther away might be slower. Therefore, the most critical links in your network are those where the traffic is high and the distances are great. Optimize those first.
- Choose placement carefully.
  For best results, place your router:
  - Near the center of the area in which your computers will operate.
  - In an elevated location such as a high shelf where the wirelessly connected computers have line-of-sight access (even if through walls).
- Avoid obstacles to wireless signals.
  - Keep wireless devices at least 2 feet from large metal fixtures such as file cabinets, refrigerators, pipes, metal ceilings, reinforced concrete, and metal partitions.
  - Keep the device away from large amounts of water such as fish tanks and water coolers.
- Reduce interference.
  Avoid windows unless communicating between buildings.
  Place wireless devices away from various electromagnetic noise sources, especially those in the 2400–2500 MHz frequency band. Common noise-creating sources are:
  - Computers and fax machines (no closer than 1 foot)
  - Copy machines and cell phones (no closer than 6 feet)
  - Microwave ovens (no closer than 10 feet)
- Choose your settings.
  - Use a scanning utility including those provided with the NETGEAR wireless adapters to determine what other wireless networks are operating nearby, and then select an unused channel.
  - Turn off SSID broadcast, and change the default SSID. Other nearby devices might automatically try to connect to your network several times a second, which can cause significant performance reduction.

Network Bandwidth

As your network grows, it might consist of several segments of different networking technologies, each providing different throughput. In planning your network, you should first consider which devices will have the heaviest traffic flow between them. Here are some examples:

- A Digital Entertainer Express in one room streaming high-definition video from a server in another room
- A storage device that is used for backing up your computers

Next, consider the throughput of your network devices. Where possible, use higher-speed technologies to make the heaviest-traffic connections with no lower-speed bottlenecks in the path.

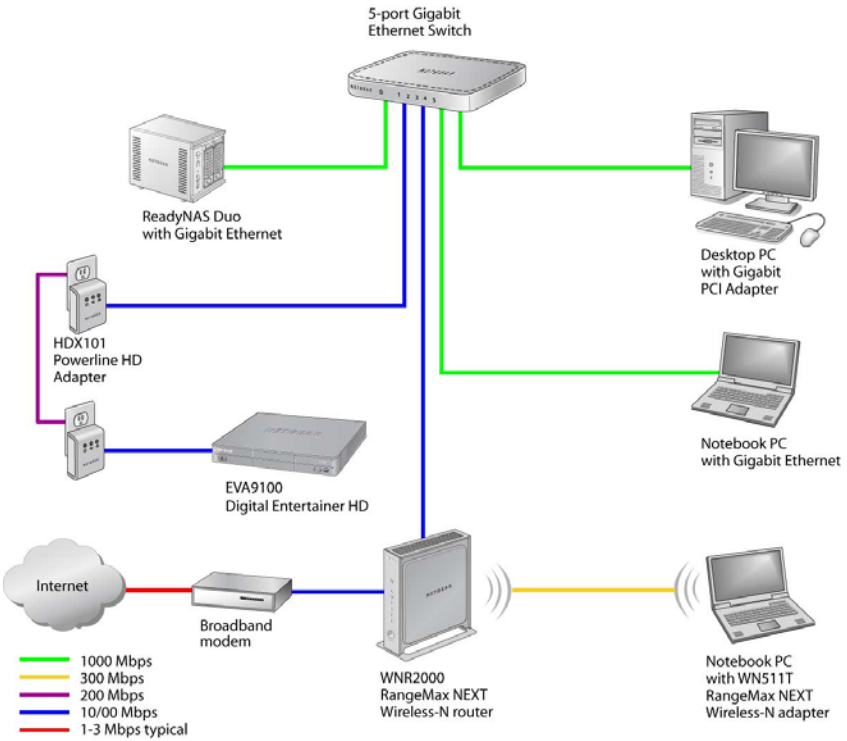


Figure 4-6

This illustration shows a sample network using multiple networking technologies. The two PCs with Gigabit (1000 Mbps) Ethernet adapters have a gigabit connection through the gigabit switch to the ReadyNAS Duo network storage unit with a gigabit connection. This connection should allow for extremely fast access to large files on the ReadyNAS™ Duo unit. The EVA9100 connected through a pair of Powerline HD adapters has access at the 200 Mbps speed of the Powerline HD connection. This is fine for any of the media files it will use over this connection and might be more suitable than running Ethernet cables to where the entertainment system is located. Although any of the links in this example would be sufficient for high-traffic applications such as streaming HD video, the use of older devices such as 10 Mbps Ethernet or 802.11b wireless would create a significant bottleneck.

Media File Performance

Video playback can be resource intensive. To avoid pauses in video viewing, select hard disk drives and network equipment designed to handle large files quickly. If you want to send video over a wireless network connection, new wireless technologies like those found in the NETGEAR RangeMax™ products are good choices. Not only do they operate at higher speeds, but they also sustain those speeds over greater distances.

File transfer speed depends on the following:

- Hard disk drive speed

  SATA hard drives can be any of the following speeds: 4,500 RPM, 5,400 RPM, 7,200 RPM, 10,000 RPM.

  Tip: For best performance, separate your media into their own set of folders. This maximizes performance of your PC and reduces the time needed to find media files.

- LAN connection speed

  A Gigabit Ethernet connection through a gigabit switch provides the fastest LAN file transfer speed and gives the best performance.
  NETGEAR HD Powerline adapters provide adequate bandwidth without the inconvenience of running Ethernet cables.

- Wireless communication speed
  - 802.11b (11 Mbps,) is not recommended for video.
  - 802.11g (54 Mbps) is not recommended for HD video.
  - 802.11n is not recommended for high bandwidth HD video. However, when using 802.11n, the 5GHz band is usually less crowded and will likely provide better performance.
  - If many wireless networks in your area are sharing the same channel, this can slow the speed of your wireless network. (The scanning utility built in to NETGEAR wireless adapters lists all wireless networks operating at your location along with the channel each is using.)
  - If any 802.11b devices are powered on in an 802.11g network, they can cause the entire network to slow to 802.11b speeds.

Tips for Streaming Video

Use these tips for the best performance with streaming video or during file transfers to the Digital Entertainer Express.

- Use a wired LAN connection to stream HD video.
- For streaming video, use no more than one wireless link. For example, do not wirelessly connect both the Digital Entertainer Express and your computer with media to your router. Replace one of these wireless links with a wired connection.
- For playing music and viewing photos, wirelessly connecting both the Digital Entertainer Express and the computer with media files should work fine.
- With a wireless 802.11g connection, you can stream standard-definition video, music, and standard-resolution photos reliably, although high network traffic and interference might cause some audio/video interruptions.
- You can use NETGEAR's Powerline HD product with a wired connection; it supports all but the most demanding HD streaming.
- Upgrade to a Dual Band 802.11n router such as the NETGEAR WNDR3300. Use the less crowded 5GHz band for video and keep your computers and other internet devices on 2.4GHz bands.
- For the EVA9100 model, add a hard drive (see "Playing Internet Media" on page 3-9) to improve playback results over wireless by using the hard drive to buffer playback.

Taking Precautions

Take precautions to secure personal data sent over wireless connections to your Digital Entertainer Express. Also take precautions for monitoring content, if you wish to exercise parental control. See the following sections for information about doing this.

Access and Network Security

Use care when sharing media, and set up security in your home network to protect your privacy and prevent unauthorized access to your photos and media files.

When sharing media use the following precautions:

- Share *only* the folders containing media files. *Do not share your main hard drive or any folder containing programs or personal data.*

- Share media folders on a read-only basis (do not allow others to write to the folders.) unless recording to the folders.
- For maximum security, consider a storage device, attached to a network, dedicated to entertainment and media.

When using a wireless network:

- Use wireless security such as WEP, WPA, or WPA2. For more about wireless security, see "Wireless Communications" in Appendix B.
- Use a firewall or home router with Network Address Translation (NAT), which hides your in-home systems from the Internet.

Setting Up Parental Control

You can block video files by rating, or block any files based on their location.

Block Video Files By Rating

To block video files using an MPAA or TV rating, mark the files with a rating and then select a rating level on your Digital Entertainer Express:

1. Use the NETGEAR Tag Tool application to tag video files with an MPAA or TV rating. From the Windows Start menu, select All Programs > NETGEAR Digital Entertainer for Windows > Tag Tool.

Note: Files without tags are considered "NR" or Not Rated, the most sensitive and highest rating.

Note: Files restricted by rating do not have to be in the same folder.

2. Change the supervisor password on your Digital Entertainer Express:
   a. Press **Home** and select More > Supervisor functions > Advanced Settings > Parental controls and security > Supervisor password.

b. Enter the new password, and press **OK**.

Note: Be sure you pick a password that is easy to remember, or store it in a safe place.

3. Select More > Supervisor functions > Advanced Settings > Parental controls and security > Parental control.

4. Select the standard entertainment industry ratings such as G, PG, NR, and so on.

Users can access files with the selected rating or a lower rating (higher up on the menu), but cannot access files tagged with a higher rating. For example, if you select PG-13, all files with a PG-13, PG, TVPG or G rating are accessible at all times. However, files with TV-14, R, NC17, TVMA or NR (no rating set) are accessible only if you enter the supervisor password.

Select the NR rating to allow access to all shared media files.

Note: To temporarily suspend parental controls for 20 minutes and display blocked files, select More > Supervisor functions and enter the supervisor password. To re-establish parental controls, press the power button to turn the device off and back on.

Block Files By Location

To block files by location, choose the shared folders that require a supervisor password:

1. Place the files in a shared folder.

2. Press **Home** on the remote and select More > Supervisor functions > Advanced Settings > Parental controls and security > Share Restrictions.

3. Select the checkboxes for the shared folders that require a supervisor password. Folders with a checked box can be accessed only with the supervisor password.

4. (Optional) Enter an additional password for each protected folder:

a. Press **Home**, and select More > Supervisor functions > Advanced Settings > Servers and shared folders > Select which servers to scan

b. Highlight the shared folder that is password protected with parental controls.

c. Press **Menu** and enter a username and password.

d. Select **OK**.

Chapter 5
Advanced Features and More Features

Use the screens you access by selecting More > Supervisor functions to perform housekeeping tasks, run media library scans, and view system information. You can also use your Digital Entertainer Express to access the desktop of a PC on your network.

Advanced Settings

Select More > Supervisor functions > Advanced Settings to display the following menu:

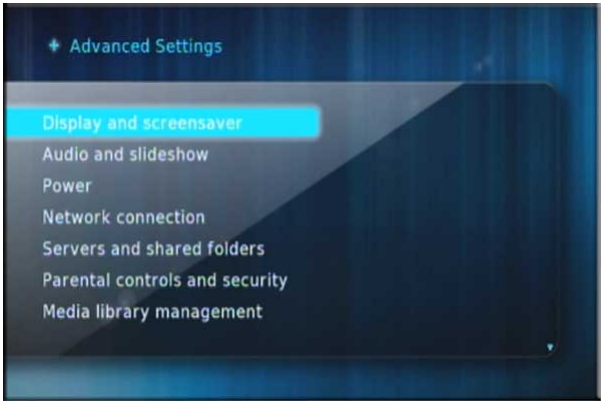


Figure 5-1

The following options are available:

- **Display and screensaver**. See “Display and Screensaver” on page 5-2.
- **Audio and slideshow**. See “Audio and Slideshow” on page 5-4.
- Power
- **Network connection**. See “Network Connection” on page 5-4.
- **Servers and shared folders**. Set up shared media files available for the Digital Entertainer Express. See “Setting Up Network Shares” on page 5-5.
- **Parental controls and security**. Set up parental controls See “Setting Up Parental Control” on page 4-13.

- **Media library management**. Manage your media library. See "Media Library Management" on page 5-5.
- **Language**. Select a language for the Digital Entertainer Express onscreen menus.
- **Time and location.** Specify your location and time zone, and synchronize your Digital Entertainer Express to a time server.
- **Other**. The following options are available:
  - **Folder browsing**. Enable or disable folder browsing. Enabling this option displays the complete folder tree starting at the top level. Enable "Live" folder browsing to display all network locations and scan each folder as you select it, adding any new media it finds to the media library.
  - **SACK Processing**. SACK audio processing is used for debugging only.
  - **Media art display**. Specifies the size of media art. Smaller files appear fast on the screen.
  - **Pop-up help**. Enables or disables the pop-up help system. Pop-up help is enabled by default.
  - **YouTube direct playback**. Enables or Disables higher quality video directly from YouTube without using a Windows PC. Since some YouTube clips are not available using this method, error messages may appear.
  - **Disable UPnP setting.** Use this to disable UPnP support in the event you are experiencing compatibility problems with UPnP devices or servers on your network.
- **Restore factory defaults**. This resets all the options to the default values as of the last installed firmware, and requires a system restart. See "Restoring Factory Settings" on page A-1.

Display and Screensaver

You can adjust the following settings:

- **Display type**. Select the display you prefer. The default is North America.
- **Display mode**. For a high-definition TV, select the appropriate resolution.
- **Aspect ratio**. When set to Normal, the aspect ratio defaults to the same setting as the content you are viewing.
- **Smooth scroll**. This setting affects the appearance of the Digital Entertainer Express menus.

- **Brightness, Contrast, Hue**. Although you can adjust these settings on the Digital Entertainer Express, it is best to leave them at the default settings of 50, and adjust the features on your TV.
- **Screen saver**. You can set the interval after which a screen saver will protect your TV from image burn-in. You can use the Image option to use a picture from your library as your screensaver.
- **Skin settings**. Choose one of the built-in skins, or backgrounds, for the onscreen menus.

Adding a Skin

The default skin setting is called FlareHD and is stored on the Digital Entertainer Express flash.

Warning: Loading an invalid skin can cause your Digital Entertainer Express to become unusable. If this occurs, you will need to restore factory defaults using the button on the rear panel of the unit. See "Restoring Factory Settings" on page A-1.

To add a skin:

1. From the main menu, select More > Supervisor functions > Advanced Settings > Display and screensaver > Skin settings.
2. Click the **Save skin** button to export the skin to the Data save location folder (set in the Advanced Settings > Media library management screen).
3. Navigate to the machine, NAS, or USB share that you are using as your data save location. Locate the Skins subfolder. Underneath that are subfolders for each defined skin. A subfolder called FlareHD was created in the previous step.
4. Uncompress the skin you want, and put it in its own subfolder.
5. From the main menu, select More > Supervisor functions > Advanced settings > Display and screensaver.
6. Select the new skin from the drop-down list, and press the **Back** button. The skin displays on your screen.

Audio and Slideshow

Use these options to customize your audio and image experience:

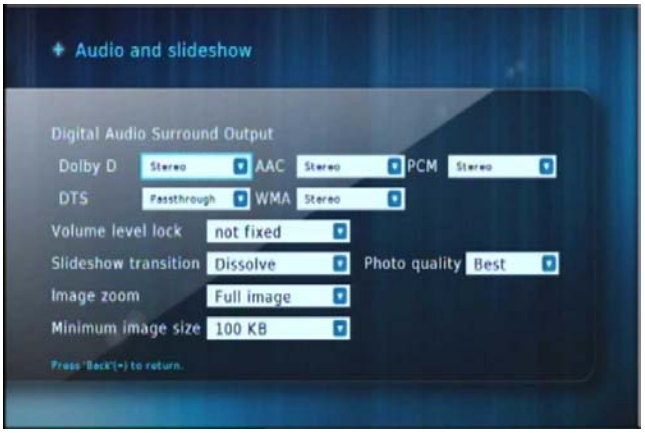


Figure 5-2

- **Digital Audio Surround Output**. You should leave these settings at the default value (Stereo) unless your system is capable of processing one of the surround sound formats. To enjoy surround sound playback, set the option to Passthrough.
- **Volume level lock**. The default value, not fixed, allows you to control the volume using the Volme Up/Down buttons. Other values let the Digital Entertainer Express set the audio level. When the volume is fixed, the volume keys on the Digital Entertainer Express remote do not operate. This is useful if you use the volume control of your home theater system and want the Digital Entertainer Express to always use the same volume level.
- **Slideshow transition**. Select the transition style you prefer for your slideshows.
- **Image zoom**. Select Full image to see your images actual size, or Fill screen to make images fill the screen. Low-resolution images might appear pixillated when displayed to fill the screen.
- **Minimum image size**. The Digital Entertainer Express does not include images smaller than the specified file size.

Network Connection

To go to the Network connection screen, press **Home**, and select More > Supervisor functions > Advanced Settings > Network connection. You can select from three types of network connections to your Digital Entertainer Express:

- **Wired**. Ethernet local area network (LAN) connection.
- **Wireless**. Wireless 802.11b, 802.11g, or 802.11n connection.
- **Standalone**. USB device connected directly to your Digital Entertainer Express.

Setting Up Network Shares

Network shares are shared folders that can be seen throughout your network. You can specify which shared folders you want the Digital Entertainer Express to check when it looks for media files.

To go to the Network Shares screen, press **Home**, and select More > Supervisor functions > Advanced Settings > Servers and shared folders. The Network Shares screen offers these options:

- **Build network shares list**. Scan the network for all shared folders.
- **Select which servers to scan**. Select which shared folders the Digital Entertainer Express should check when it scans for media files.
- **Add network share**. Enter the name of a hidden server, or add a password to a server. A hidden server does not broadcast its network name.

Media Library Management

The media library is a list of media that the Digital Entertainer Express has found in shared folders on the network. There are two versions of your media library: One resides on the Digital Entertainer Express, and the other is a backup, located in the data save location you specify. The backup library can be saved to a device on your network, or to an external device. Each time the Digital Entertainer Express searches for media, it can save a new library. If there is a library, the Digital Entertainer Express powers up faster in the event of a network problem or power outage.

To go to the Media library management screen, press **Home**, and select More > Supervisor functions > Advanced Settings > Media library management.

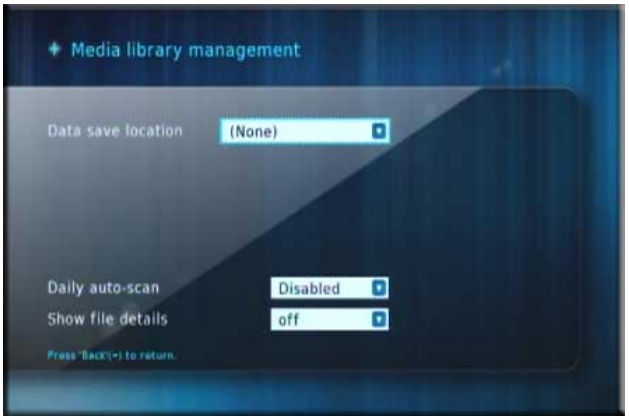


Figure 5-3

The Media library management screen offers these options:

- **Data save location**. Specify where your backup library should be saved.
- **Load library**. Load the media library.
- **Save library**. Save the media library to a new location, either on your network or on an external device. This creates a backup library.
- **Auto load on power-up**. If this option is on, the Digital Entertainer Express loads the backup library following a power failure.
- **Auto save after scan**. Immediately after new files are scanned, the backup library is updated to the version on the Digital Entertainer Express.
- **Daily auto-scan**. Set the Digital Entertainer Express to scan your files every day at the specified time, or you can disable this option.

⚠	**Warning:** This option requires your computer to be on and the shared files available at the specified time. If your computer is in sleep, standby, or any mode other than on, the scan will find no shared files, and your library will contain no media. To avoid this, you can disable Daily auto-scan, or leave the computer on, or enable the computer Wake on LAN feature so that your computer is activated by the scan.

- **Show file details**. This option is for use in detecting invalid files and should be left off unless you are instructed to use it by NETGEAR support personnel.

More... Settings

To go to the More Settings, press **Home**, and select More:

Figure 5-4

The following settings are available in the More screen:

- **Quick scan for media files**. Look for new media files and add them to the media library.
- **Now playing**. Display the audio and video media that is currently playing.
- **Follow me**. To use this feature you must have more than one Digital Entertainer Express installed. Selecting Follow me lets you direct the media that is playing to another Digital Entertainer Express in a different room.
- **Send message to other room**. You can select a message to send to another Digital Entertainer Express in a different room. To use this feature you must have more than one Digital Entertainer Express installed.
- **Hot key binding**. You can set up the number keys on the remote control as hot keys to perform specific tasks. For example, you could press a number button when the TV is off to play music without using the onscreen menus.
- **Supervisor Functions**. See “Supervisor Functions” on page 6-4.

System Information

System information is useful for troubleshooting network problems or technical support.

To go to the System Information screen, press **Home**, and select More > Supervisor functions > System Information. The System Information screen displays information about free memory, version information (kernel and firmware), dynamic RAM information, network information (LAN), IP address, MAC, broadcast information, and gateway.

Setting Up Hot Keys

You can set up the number keys on the remote control as hot keys to perform specific tasks. For example, you could press a number button when the TV is off to play music without using the onscreen menus.

To set up a hot key:

1. Press **Home**, and select More > Hot key binding.
2. Select the key on the remote control that you want to program.
3. Select an action from the list for this hot key.

To use the hot keys when the television is off, turn on the Digital Entertainer Express, and then press the hot key.

Enabling PC Access

To use this feature you must have a Windows-based PC running the Digital Entertainer for Windows software. PC Access lets you use the remote control and TV to view and access features on your PC such as browsing the Internet or checking e-mail.

To use the Digital Entertainer Express PC Access feature:

1. Click the Digital Entertainer for Windows system tray icon on your PC to open the Digital Entertainer application.

2. Select the Allow remote access to this PC check box and then click **Apply**

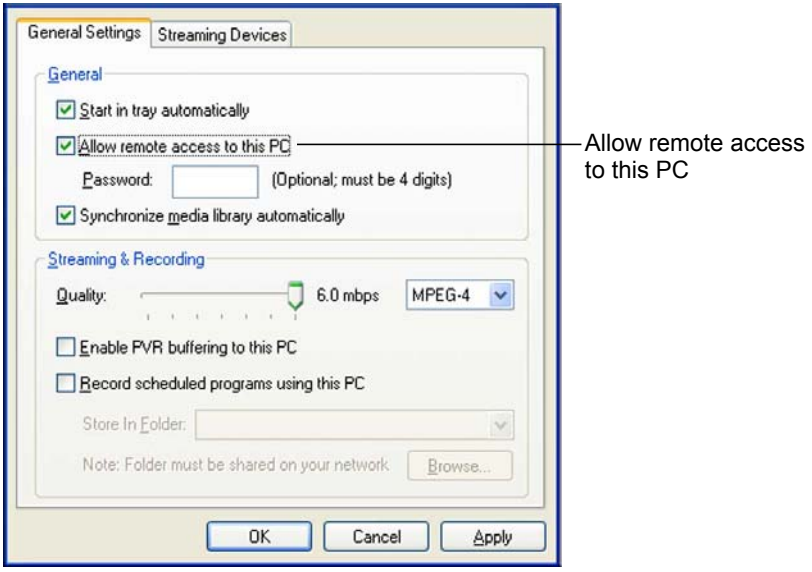


Figure 5-5

3. To access your PC functions, press **Home**, and select More > PC access, and select your PC from the list in the Access PC screen.

4. When the desktop for your PC appears on the TV, use the remote control to access the PC from your Digital Entertainer Express.

Table 5-1. Remote Control PC Access Is Enabled

Button	Action
	Backspace
	Nudge mouse
	Switch (Alt+Tab)
	Exit PC Access

Table 5-1. Remote Control PC Access Is Enabled (continued)

Button	Action
	Back Tab
	Close program (Alt + F4)
	Back (Alt+Left Arrow)
	Tab
	Next (Alt+Right Arrow)
	Left mouse-click
	+ Zooms in - Zooms out
Menu?	Toggle Alt key. Changes the Alt key status from pressed to not pressed and back. Use this to access an application menu.
0–9	Use numbers to enter letters.
Caps Lock	Toggle keyboard. Press **Caps Lock** to display or hide the onscreen keyboard.
Zoom	Select program.

Chapter 6
Maintenance and Troubleshooting

Updating the Firmware

	Warning: Make sure that power to your Digital Entertainer Express unit is not interrupted during the firmware update process. Failure to observe this precaution can permanently damage the unit.

When you install the Digital Entertainer software from the *Resource CD* you are asked if you want to check for new firmware.

Figure 6-1

You can also check for newer firmware after installation. If you upgrade the firmware you will need to reload your media library into the Digital Entertainer Express from the backup location

To upgrade firmware after installation:

1. Press **Home**, and select More > Supervisor functions > Update.

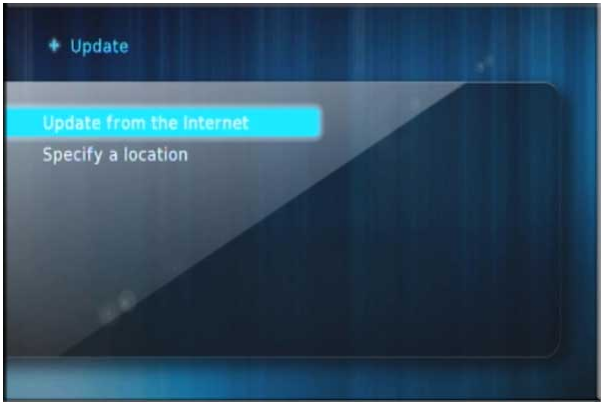


Figure 6-2

- To check for firmware updates on the NETGEAR website, select **Update from the Internet**, and follow the onscreen prompts.
- If the firmware file is located on a USB storage device, connect the device to the USB port of your Digital Entertainer Express, and select **Specify a location**. Uncompress the .zip file, if necessary. The .img firmware file must be on the top level (root) of the device. If more than one file is on the device, you are prompted to select a file.

2. When the update is complete, the Digital Entertainer Express restarts.
3. Following a firmware update, you need to reload your media library into the Digital Entertainer Express from the backup location.
   - You can use the Configuration wizard with a Windows-based PC or Mac to locate shared media. See “Configuring Your Media Library” on page 1-11.
   - To manually locate shared media, press Home > More > Supervisor functions > Advanced Settings > Servers and shared folders. See “Setting Up Network Shares” on page 5-5.

Changing from Composite Video Cable to HDMI Video Cable

This section explains what to do if you installed the Digital Entertainer Express with the composite video cable that came in the package and now want to install an HDMI cable (sold separately). Your television must support an HDMI connection.

> If the Digital Entertainer Express is connected with both a composite video cable and an HDMI video cable, it will communicate via the HDMI cable, but unless the television is in HDMI mode you will not see a video display on the television screen.

To change from composite video cable to HDMI video cable:

1. Connect the HDMI cable from the Digital Entertainer Express to your television.

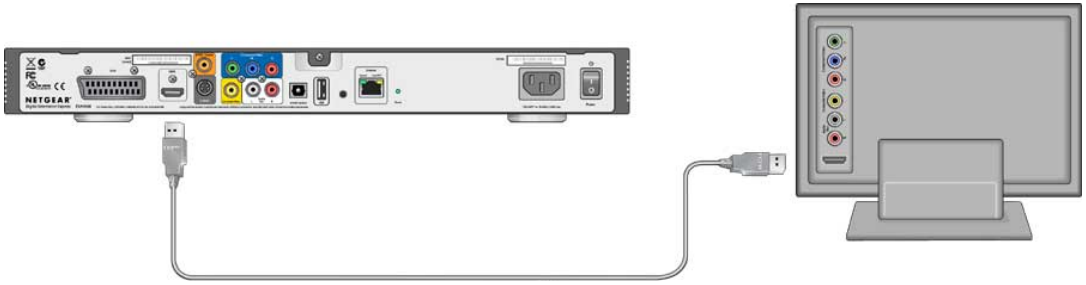


Figure 6-3

2. Change the video mode for your television from AV to HDMI. If you are not sure how to do this, check the documentation that came with your television.
3. You may disconnect the composite video cable if you wish.

Supervisor Functions

To go to the Supervisor Functions screen, press **Home**, and select More > Supervisor functions:

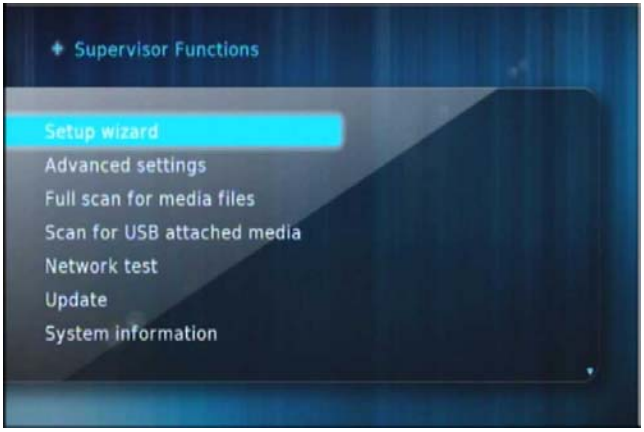


Figure 6-4

The Supervisor Functions screen offers these options:

- **Setup wizard**. Enter or change the settings for the Digital Entertainer Express.
- **Advanced settings**. See "Advanced Settings" on page 5-1.
- **Full scan for media files**. Rebuild the media library. This replaces current media files and adds newfound media files. A full scan takes significant time, depending on the number of folders you have designated for sharing.
- **Scan for USB attached media**. Check for media stored on devices such as an iPod or MP3 player that are connected to the Digital Entertainer Express.
- **Network test**. Measure the data transfer rate between devices on your network and your Digital Entertainer Express.
- **Update**. Check for firmware updates for the Digital Entertainer Express on the NETGEAR website, or update the firmware from a file on a USB storage device. See "Updating the Firmware" on page 6-1 for more information.

⚠	**Warning:** Be sure that power to your Digital Entertainer Express unit is not interrupted during the firmware update process. Failure to observe this precaution can permanently damage the unit.

Note: Following a firmware update, you may need to reload your media library into the Digital Entertainer Express from the backup location.

- **System Information**. See "System Information" on page 5-7.
- **Restart**. Restart the Digital Entertainer Express.

Troubleshooting Tips

Here are some tips for correcting simple problems that might prevent you from connecting to the Digital Entertainer Express.

Table 6-1. Connecting to the Digital Entertainer Express

Problem	Solution
I turned on my Digital Entertainer Express for the first time, but I do not see anything on the screen.	• Check all cables to make sure that they are connected correctly, and be sure that you are using the correct input on your TV. • Check that your TV's input selector (sometimes called TV/Video button) is set to the correct input. • If you still do not see anything, press **TV Mode** on the remote control to change the video mode. Make sure to pause for 3 seconds between button presses to allow the Digital Entertainer Express to change video modes.
The Digital Entertainer Express does not respond to the remote control.	Check the LED on the front panel of the Digital Entertainer Express to make sure that the power is on. Make sure that the television is turned on. The LED on the remote control should flash when you push a button. • If the LED does not flash, and the batteries are working, then the remote might be faulty. • If the LED does flash, reset the Digital Entertainer Express. • Press the DE DE button on the remote and try again.
The Digital Entertainer Express does not find my network.	• Use the Configuration Wizard, and check the settings. On the Windows Start menu, select All Programs> NETGEAR Digital Entertainer for Windows > Configuration Wizard. • For wireless networks, see the *User Manual* for your Wi-Fi USB Adapter (sold separately).

Table 6-1. Connecting to the Digital Entertainer Express (continued)

Problem	Solution
The Digital Entertainer Express does not find the server.	• Make sure that the computer and the Digital Entertainer Express are connected to the same network and turned on. • If you do not use DHCP on your network, you must set the IP address of the Digital Entertainer Express in the range of addresses on your network. See "IP Address" on page 6-10. • Use the Configuration Wizard to check the settings. On the Windows Start menu, select All Programs> NETGEAR Digital Entertainer for Windows > Configuration Wizard.
Some files, songs, or videos are not showing up even though others are.	Check the file permissions for those items, and make sure that they have read access allowed for everyone.
The server cannot be found in a Windows domain.	If the PC where the Digital Entertainer for Windows software is running is a member of a Windows domain: 1. Make sure that you are connected to the domain (either by being on the same network, or by using a VPN connection), and then restart folder sharing in Windows Media Connect. 2. If this is not possible, uninstall the Digital Entertainer for Windows software, and reinstall it using a local user account. Then set up sharing with the Digital Entertainer for Windows software while logged in with this local user account.

Media Does Not Play

Check "Supported Media File Formats" on page A-2 to see if the file format is supported.

Check to see if the file is protected. Windows Media Player 11 is required for Windows XP and Vista users to play protected files. See the Microsoft documentation for these products.

Note: If you use Windows Media Player 11, place protected media files in one folder, and use Windows Media Player to share only that folder. Then use the Configuration Wizard to share all other folders.

Configuring Your Firewall Port Settings

The built-in Windows firewall opens ports to communicate with the Digital Entertainer Express. For other firewalls, you might need to open these ports:

- TCP: 49156, 49157, 49158, 49159
- UDP: 49152, 49153, 49154, 49155

If you are using a Windows PC to share media content, allow access to the following ports: 139 TCP, 445 TCP, 137 UDP, and 138 UDP for file-sharing services.

If you are using Windows Media Player to share media from Windows, configure your desktop firewall to allow ports 10243 TCP and 10280–10284 UDP.

If you are using the UPNP Framework under Windows XP, configure your desktop firewall to allow port 1900 UDP and 2869 TCP. For more information see *http://support.microsoft.com/kb/886257/.*

Accessing Your Digital Media

The following sections provide some suggestions for accessing digital media with Windows, Macintosh OSX, and Linux.

Windows System Passwords

If your system requires a password on startup, you need to use one of these access methods:

- Recommended: Enable guest access on PCs that have a startup password. From the Windows Start menu, select Settings > Control Panel > User Accounts, and enable guest access.
- Manually enter passwords on your Digital Entertainer Express.
- Remove the password from the main administrator account.

Macintosh OSX

Turn off the Macintosh firewall, and then select the sharing icon from system preferences.

1. Click **Firewall**, select Stop, and verify that “Firewall off” is displayed.
2. Select the sharing icon from system preferences, and select the Windows Sharing check box. Make sure that “Windows Sharing On” is displayed.

Once the system is up and running, for better security you can configure your OSX firewall to allow file access while blocking other network ports. For file sharing you must allow access through TCP ports 139 and 445, and UDP ports 137 and 138.

Linux

You need to load and install a Samba server.

- On Redhat 9 systems, click the **Red Hat** button, and select System Settings > Server Settings > Samba Server. Click **Add** in the dialog box that displays.
- On other systems, you might need to install the Samba server (smbd) manually and modify the samba configuration file (/etc/smb.conf on most systems; select the man smbd check box). If Samba is not installed, see *http://www.samba.org*.

Error Messages

The following table describes error messages and recommended actions when they occur.

Table 6-2. Error Messages

Message	Description and Action
Please configure the program guide location.	You need to enter your zip code to receive local news and weather.
Network Performance Insufficient.	The network throughput is not high enough to handle the file type specified, such as playing high-definition video over a wireless network. See "Optimizing the Performance of Your Home Network" on page 4-8 for more information.
Unable to play this media. The media format is not supported, or the location is not accessible.	The media format is not supported by the Digital Entertainer Express, or the file could not be opened or might no longer be available. • Play a supported media file. • Check the network connection. • Verify the existence of the file. • Verify the PC or server is powered on. • Check the access permissions on the file and folder. • Verify that the file format and encoding are supported. See "Supported Media File Formats" on page A-2 for more information.
Unable to play this media. The media could not be opened, or the location is not accessible.	The file cannot be opened or might no longer be available. • Check the network connection. • Verify the existence of the file. • Check the access permissions on the file and folder.
Unable to play this media. The media is protected, and a license could not be obtained.	• The file is protected by Windows Media DRM, and the license for the file is expired, or invalid, or was not granted. • Verify that the file is playable from Windows Media Player.
Unable to play this media. There are insufficient resources to open or play the media.	Restart the Digital Entertainer Express. If the problem persists after restarting the Digital Entertainer Express, then the media dimensions or encoding is not supported.
Unsupported video - may not play correctly.	The video is a DIVX 3 video. Some DIVX 3 videos do not play back correctly on the Digital Entertainer Express.

Table 6-2. Error Messages (continued)

Message	Description and Action
Unable to play this station.	The format of the selected Internet radio station is not supported. The Digital Entertainer Express supports only MP3 streaming audio formats for Internet radio playback.
Error loading picture. Photo format is not supported.	The photo is not a JPEG, TIFF, BMP or PNG, or the dimension, encoding, or color space of the photo is not supported.
Error loading picture. Photo does not exist.	The file cannot be opened or might no longer be available. • Check the network connection. • Verify the existence of the file. • Check the access permissions on the file and folder.
Error loading picture. Photo is too large or has encoding errors.	The dimensions of the photo are too large for it to be loaded, or the file is invalid.
Error loading picture. Photo could not be read.	The file exists, but an error occurred when it was accessed. • Check the network connections. • Check access permissions on the file and folder. • Check that the photo is viewable on a PC.
Error loading picture. Access denied reading the photo.	• The file exists but does not allow read access to the Digital Entertainer Express. • Check access permissions on the file and folder.
Subtitles not available.	The external subtitles for a video do not exist or could not be loaded. The subtitles might be in an unsupported format. Supported subtitle formats are SRT, SMI, SAMI, SUB, and TXT.

Network Connections

The following sections provide recommendations for how to troubleshoot network connections.

Ethernet LAN Connection

The Digital Entertainer Express expects to be connected to a hub, switch, or router using a standard Ethernet cable. If you connect to your network using Ethernet, the link LEDs on the back of your Digital Entertainer Express and on your hub or router should both be on. If they are not lit, try the following:

- Make sure that the Ethernet cable connections are secure at the router and at the hub or workstation.
- Make sure that power is turned on to the connected hub or workstation.

- Make sure that you are using a standard Ethernet cable and not a cross-connect cable.

IP Address

If the Digital Entertainer Express does not receive a valid IP address, try the following:

1. Verify that a working DHCP server is on your network. Computers on the network should get IP addresses in the correct range.

   If the Digital Entertainer Express is set to use DHCP and fails to obtain an IP address from the server, it resorts to a default IP address of 127.0.0.1. You can use a static IP address if there is a problem connecting to the DHCP server.

2. If you are using a wireless network, verify that the Digital Entertainer Express is associated with the correct SSID. To display the SSID, follow the instructions in "Setting Up Network Shares" on page 5-5.

3. If you are using a secure wireless network, verify that the security settings, such as WEP or WPA, on the Digital Entertainer Express, match the settings on your access point. For information about wireless security, see "Wireless Networking Basics" listed in Appendix B, "Related Documents."

Connecting to a Server

If the Digital Entertainer Express cannot find the correct server, try the following:

1. Verify that the Digital Entertainer Express and the PC running the Digital Entertainer for Windows software are on the same subnet.

   For example, you could use a subnet with IP addresses in the range of 192.168.0.x for both the Digital Entertainer Express and the PC, with a subnet mask of 255.255.255.0.

2. For Windows PCs, run the Configuration Wizard to verify that the Digital Entertainer Express and the computer can communicate. From the Windows Start menu, select All Programs > NETGEAR Digital Entertainer for Windows > Configuration Wizard.

3. For other systems, try rebuilding the server list. Press **Home**, and select More > Supervisor functions > Advanced settings > Servers and shared folders > Build network shares list. If you do not see the server, check your network connections and router firewall settings, and try to ping the IP of the Digital Entertainer Express.

4. Try accessing the server from other Windows-based PCs. If these PCs can see the server, the Digital Entertainer Express will too.

Using Ping

To use ping:

1. From the Windows taskbar, click the Start button, and select Run.
2. In the field provided, type **ping** followed by the IP address of the Digital Entertainer Express. Displaying the IP address is described in "IP Address" on page 6-10. For example, type:

   ping 192.168.0.2

3. Click **OK**. You should see a message like this one:

   ```
   pinging <IP address> with 32 bytes of data
   ```

   If the path is working, you see this message:

   ```
   reply from < IP address >: bytes=32 time=NN ms TTL=xxx
   ```

   If the path is not working, you see this message:

   ```
   request timed out
   ```

If you cannot ping the Digital Entertainer Express, then your network might not be working correctly.

Appendix A
Default Configuration and Technical Specifications

This appendix describes the factory default settings, supported media file formats, and technical specifications for the Digital Entertainer Express.

Restoring Factory Settings

There are two ways to restore factory configuration:

- Press **Home**, and select More > Supervisor functions > Advanced Settings > Restore factory defaults.
- Power off the unit from the rear power switch, then power on the unit. Wait for the LED to blink orange, then press and hold the Restore Factory Settings button.

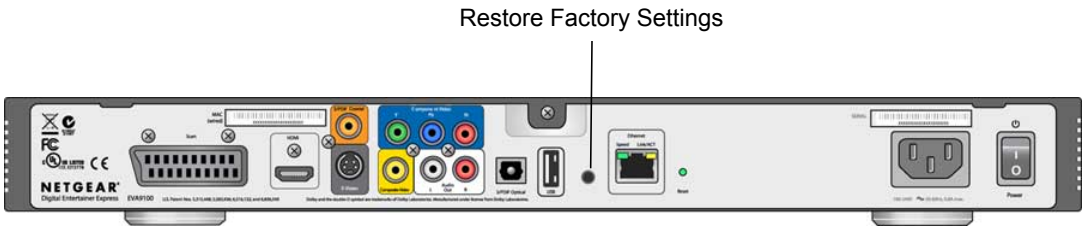


Figure A-1

The LED will begin blinking blue signaling that factory defaults are being restored, and then the unit will restart.

The following table lists the default settings of your Digital Entertainer Express.

Table A-1. Default Configuration Settings

Feature	Description
Language	English
Video mode	Standard definition NTSC

Table A-1. Default Configuration Settings (continued)

Feature	Description
Room name	Computer room
Network connection	Wired LAN
Skin	FlareHD

Supported Media File Formats

A number of file formats are supported for live streaming. Formats are added regularly. To see the most current list, go to *http://kbserver.netgear.com/products/eva.asp* and select the EVA9100. Then access the Media formats link for file formats supported by your model.

Technical Specifications

Table A-2. Technical Specifications

Feature	Description
Data and routing protocols	TCP/IP, DHCP
Power adapter	• North America: 120V, 60 Hz, input • United Kingdom, Australia: 240V, 50 Hz, input • Europe: 230V, 50 Hz, input • Japan: 100V, 50/60 Hz, input • Maximum input current NA: 0.24A; UK; AU: 0.15A; EU: 0.15A; JP: 0.27A
Physical specifications	• Dimensions (H x W x D): 1.5 x 17 x 10 in. (38.1 x 431.8 x 254 mm) • Weight: 4.4 lbs (2.0 kg)
Environmental specifications	• Operating temperature: 32º–104º F (0°–40° C) • Operating humidity: 90% maximum relative humidity, noncondensing
Electromagnetic emissions	FCC Part 15 Class B, VCCI Class B, EN 55 022 (CISPR 22), Class B C-Tick N10947
Interface	LAN: 10BASE-T or 100BASE-Tx, RJ-45
Radio data rates	11a, 11b, 11g & 11n data rates (Auto Rate Sensing)
Frequency	2400 - 2483.5 MHz 5150 - 5825MHz

Table A-2. Technical Specifications (continued)

Feature	Description
Data encoding	Standards • IEEE 802.11n draft • IEEE 802.11b, IEEE 802.11g, IEEE 802.11n - 2.4 GHz • IEEE 802.11a, IEEE 802.11n - 5.0 GHz
Operating frequency ranges	• US 2.4Ghz 2400 Mhz-2462 Mhz • EU 2.4Ghz 2400 Mhz-2483.5 Mhz • US 5 Ghz non-DFS 5150 Mhz-5250 Mhz and 5725 Mhz-5875 Mhz • EU 5 Ghz 5150-5250, 5250-5350, 5475-5725, 5725-5875

Appendix B
Related Documents

This appendix provides links to reference documents you can use to gain a more complete understanding of the technologies used in your NETGEAR product.

Document	Link
Windows XP and Vista Wireless Configuration Utilities	*http://documentation.netgear.com/reference/enu/winzerocfg/index.htm*
Internet Networking and TCP/IP Addressing	*http://documentation.netgear.com/reference/enu/tcpip/index.htm*
Wireless Communications	*http://documentation.netgear.com/reference/enu/wireless/index.htm*
Preparing a Computer for Network Access	*http://documentation.netgear.com/reference/enu/wsdhcp/index.htm*
Virtual Private Networking (VPN)	*http://documentation.netgear.com/reference/enu/vpn/index.htm*
Glossary	*http://documentation.netgear.com/reference/enu/glossary/index.htm*

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Compliance

Certificate of the Manufacturer/Importer

It is hereby certified that the Digital Entertainer Express EVA9100 has been suppressed in accordance with the conditions set out in the BMPT-AmtsblVfg 243/1991 and Vfg 46/1992. The operation of some equipment (for example, test transmitters) in accordance with the regulations may, however, be subject to certain restrictions. Please refer to the notes in the operating instructions.

The Federal Office for Telecommunications Approvals has been notified of the placing of this equipment on the market and has been granted the right to test the series for compliance with the regulations.

Bestätigung des Herstellers/Importeurs

Es wird hiermit bestätigt, daß dasDigital Entertainer Express EVA9100 gemäß der im BMPT-AmtsblVfg 243/1991 und Vfg 46/1992 aufgeführten Bestimmungen entstört ist. Das vorschriftsmäßige Betreiben einiger Geräte (z.B. Testsender) kann jedoch gewissen Beschränkungen unterliegen. Lesen Sie dazu bitte die Anmerkungen in der Betriebsanleitung.

Das Bundesamt für Zulassungen in der Telekommunikation wurde davon unterrichtet, daß dieses Gerät auf den Markt gebracht wurde und es ist berechtigt, die Serie auf die Erfüllung der Vorschriften hin zu überprüfen.

Voluntary Control Council for Interference (VCCI) Statement

This equipment is in the Class B category (information equipment to be used in a residential area or an adjacent area thereto) and conforms to the standards set by the Voluntary Control Council for Interference by Data Processing Equipment and Electronic Office Machines aimed at preventing radio interference in such residential areas. When used near a radio or TV receiver, it may become the cause of radio interference. Read instructions for correct handling.

FCC Information to User

This product does not contain any user serviceable components and is to be used with approved antennas only. Any product changes or modifications will invalidate all applicable regulatory certifications and approvals

FCC Guidelines for Human Exposure

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.”

Declaration Of Conformity

We NETGEAR, Inc. 350 E. Plumeria Drive San Jose, CA 95134 USA, declare under our sole responsibility that the Digital Entertainer Express EVA9100 complies with Part 15 of FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

Regulatory Compliance Information

This section includes user requirements for operating this product in accordance with National laws for usage of radio spectrum and operation of radio devices. Failure of the end-user to comply with the applicable requirements may result in unlawful operation and adverse action against the end-user by the applicable National regulatory authority.

NOTE: This product's firmware limits operation to only the channels allowed in a particular Region or Country. Therefore, all options described in this user's guide may not be available in your version of the product.

FCC Requirements for Operation in the United States

Radio Frequency Interference Warnings and Instructions

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following methods:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an electrical outlet on a circuit different from that which the radio receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Modifications made to the product, unless expressly approved byNETGEAR, Inc., could void the user's right to operate the equipment.

Export Restrictions

This product or software contains encryption code that may not be exported or transferred from the US or Canada without an approved US Department of Commerce export license.

CE 0560 !

This device is a 2.4 GHz low power RF device intended for home and office use in EU and EFTA member states. In some EU / EFTA member states some restrictions may apply. Please contact local spectrum management authorities for further details before putting this device into operation.

Marking by the above symbol indicates compliance with the Essential Requirements of the R&TTE Directive of the European Union (1999/5/EC). This equipment meets the following conformance standards: EN300 328, EN301 489-17, EN60950.

Requirements For Operation in the European Community

Countries of Operation and Conditions of Use in the European Community

The user should run the client utility program provided with this product to check the current channel of operation and confirm that the device is operating in conformance with the spectrum usage rules for European Community countries as described in this section.

This device is intended to be operated in all countries of the European Community.

Operation Using 2.4 GHz Channels in France

The following radio channel usage limitations apply in France.

The radio spectrum regulator in France, Autorité de regulation des telecommunications (ART), enforces the following rules with respect to use of 2.4 GHz spectrum in various locations in France. Please check ART's web site for latest requirements for use of the 2.4 GHz band in France: http://www.art-telecom.fr/eng/index.htm. When operating in the following metropolitan regions (départements) in France, this device may be operated under the following conditions:

- Indoors using any channel in the 2.4-2.4835 GHz band (Channels 1-13)
- Outdoors using channels in the 2.4-2.454 GHz band (Channels 1-7)

When operating outside of the following regions (départements) in France (see table below), this product must be operated under the following conditions:

- Indoors using channels in the 2.4465-2.4835 GHz band (Channels 10-13).
- Outdoor operation not permitted.

Refer to the ART website for further details.

European Union Statement of Compliance

Hereby, NETGEAR, Inc. declares that this digital media player is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Èesky [Czech]	NETGEAR, Inc. tímto prohlašuje, že tento Digital Entertainer Express EVA9100 je ve shodì se základními požadavky a dalšími pøíslušnými ustanoveními smìrnice 1999/5/ES.
Dansk [Danish]	Undertegnede NETGEAR, Inc. erklærer herved, at følgende udstyr Digital Entertainer Express EVA9100 overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
Deutsch [German]	Hiermit erklärt NETGEAR, Inc., dass sich das Gerät Digital Entertainer Express EVA9100 in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
Eesti [Estonian]	Käesolevaga kinnitab NETGEAR, Inc. seadme Digital Entertainer Express EVA9100 vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
English	Hereby, NETGEAR, Inc., declares that this Digital Entertainer Express EVA9100 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Español [Spanish]	Por medio de la presente NETGEAR, Inc. declara que el Digital Entertainer Express EVA9100 cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ NETGEAR, Inc. ΔΗΛΩΝΕΙ ΟΤΙ Digital Entertainer Express EVA9100 ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
Français [French]	Par la présente NETGEAR, Inc. déclare que l'appareil Digital Entertainer Express EVA9100 est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.

Italiano [Italian]	Con la presente NETGEAR, Inc. dichiara che questo Digital Entertainer Express EVA9100 è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo NETGEAR, Inc. deklarç, ka Digital Entertainer Express EVA9100 atbilst Direktîvas 1999/5/EK bûtiskajâm prasîbâm un citiem ar to saistîtajiem noteikumiem.
Lietuviø [Lithuanian]	Šiuo NETGEAR, Inc. deklaruoja, kad šis Digital Entertainer Express EVA9100 atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
Nederlands [Dutch]	Hierbij verklaart NETGEAR, Inc. dat het toestel Digital Entertainer Express EVA9100 in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
Malti [Maltese]	Hawnhekk, NETGEAR, Inc., jiddikjara li dan Digital Entertainer Express EVA9100 jikkonforma mal-tiijiet essenzjali u ma provvedimenti orajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
Magyar [Hungarian]	Alulírott, NETGEAR, Inc. nyilatkozom, hogy a Digital Entertainer Express EVA9100 megfelel a vonatkozó alapvetõ követelményeknek és az 1999/5/EC irányelv egyéb elõírásainak.
Polski [Polish]	Niniejszym NETGEAR, Inc. oœwiadcza, ¿e Digital Entertainer Express EVA9100 jest zgodny z zasadniczymi wymogami oraz pozosta³ymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
Português [Portuguese]	NETGEAR, Inc. declara que este Digital Entertainer Express EVA9100 está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Slovensko [Slovenian]	NETGEAR, Inc. izjavlja, da je ta Digital Entertainer Express EVA9100 v skladu z bistvenimi zahtevami in ostalimi relevantnimi doloèili direktive 1999/5/ES.
Slovensky [Slovak]	NETGEAR, Inc. týmto vyhlasuje, že Digital Entertainer Express EVA9100 spåòa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
Suomi [Finnish]	NETGEAR, Inc. vakuuttaa täten että Digital Entertainer Express EVA9100 tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]	Härmed intygar NETGEAR, Inc. att denna Digital Entertainer Express EVA9100 står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

A printed copy of the EU Declaration of Conformity certificate for this product is provided in the EVA9100 product package.

Canadian Department of Communications Radio Interference Regulations

This digital apparatus (Digital Entertainer Express EVA9100) does not exceed the Class B limits for radio-noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

Industry Canada Statement

This device complies with RSS-210 of the Industry Canada Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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IMPORTANT NOTE

Radiation Exposure Statement

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. To maintain compliance with IC RF exposure compliance requirements, please follow operation instruction as documented in this manual.

The Class [B] digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulation.

Cet appareil numerique de la class [B] respecte toutes les exigences du Reglement sur le materiel brouilleur du Canada.

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